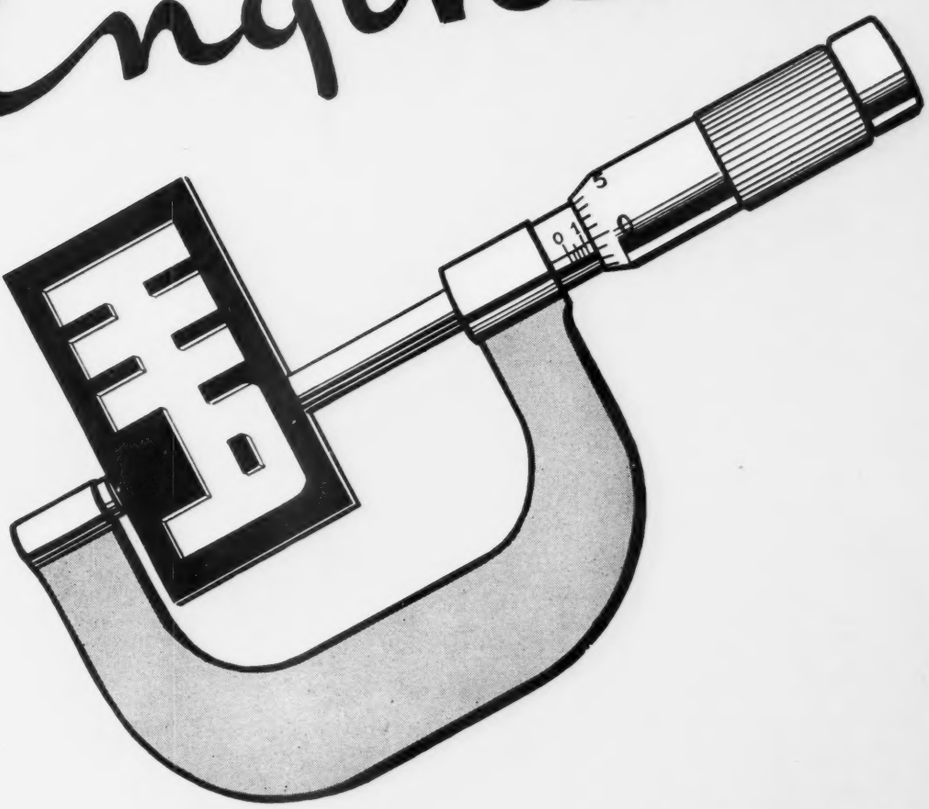
Printing Equipment Engineer



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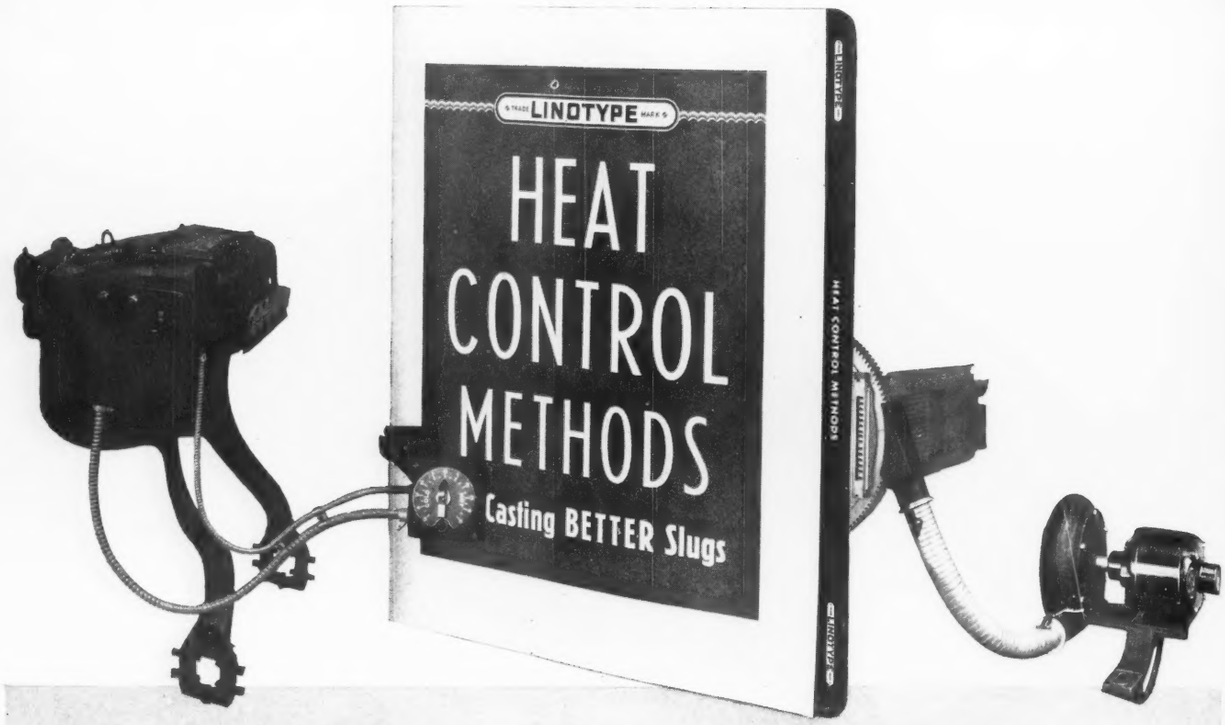

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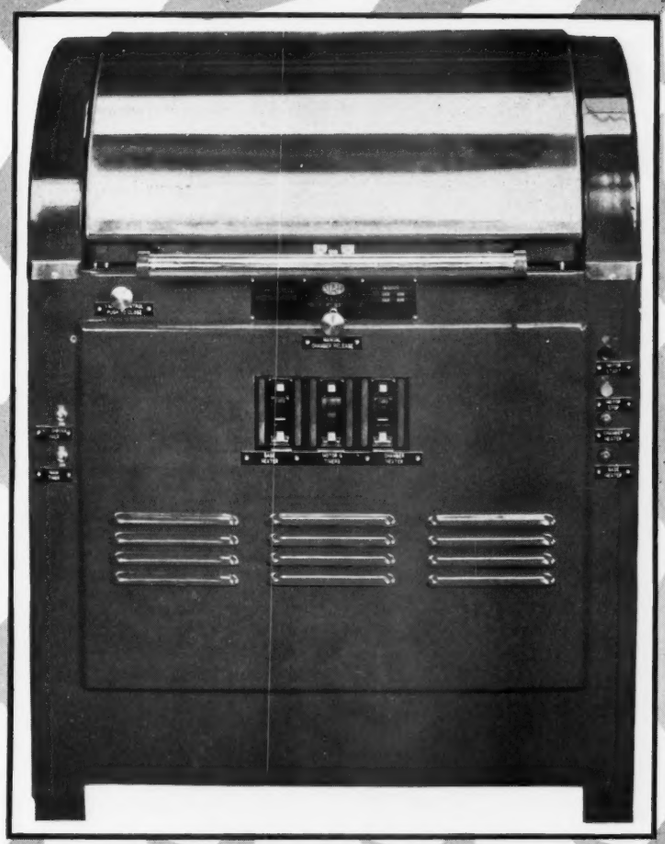

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Angle Composition . . .

The measuring, setting and sawing of angles

By JOSEPH FLEISCHER and DAVID REISZ*

**Cleveland Printers.*

TO attract attention, many magazine and newspaper advertisements are printed with angular insets, boxes and the like. Because angled composition has been difficult to compose in the past, some printers still are using photographically reproduced type copy rather than the type itself set in angular position.

By other old methods, the angular gaps are filled with quads, slugs, matches, wet paper, plaster of paris, type metal poured from a ladle by hand, or the finished photo-engravings are mortised to accommodate the type matter. All of these methods are expensive, laborious processes and none of them really are very efficient.

Some ad compositors who have advanced beyond these more or less obsolete processes still find it necessary to wait until the zinc etching or mortised stereotype shell cast is ready. When they get it, they mark the base and trust to their hands and eyes as the guiding influence in cutting the proper angles from basing material.

There is now no need to use rule-of-thumb methods because several devices for cutting angular work have appeared upon the market from time to time.

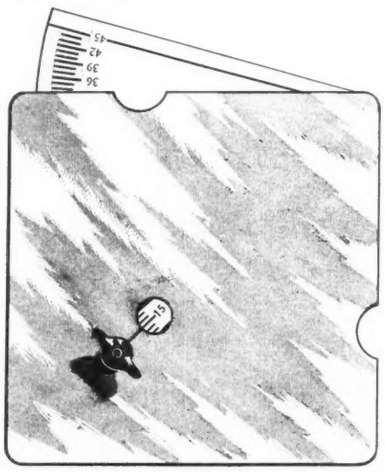
By means of a new device sponsored by the writers, called the Angle-Meter, angled work can be sawed accurately with a composing room saw. The Angle-Meter is used to transfer angles from copy directly to the saw, so the saw gauge

The angles of all the rules and the invisible angular pieces surrounding the inset box were produced on a composing room saw-trimmer with the aid of the Angle-Meter.

may be set to the proper angle. With this device, any degree angle may be transferred from either a completely finished or merely planned art copy, even if it is required that the art copy should first be reduced or enlarged.

In the reduction or enlargement of art copy, the lengths of the angles change but the degree of the angles remains the same. It is possible with the Angle-Meter to measure, set and saw angles and to build up printing forms before the zinc etchings are made in the photo-engraving department.

While in other composition operations the exact dimension is important, in angle sawing the exact degree is very much more important in order to get the parallel effect desired in printing. If angular base, used as a mortise, differs from the art copy even but slightly in degree, the type matter cannot be lined up parallel with it.



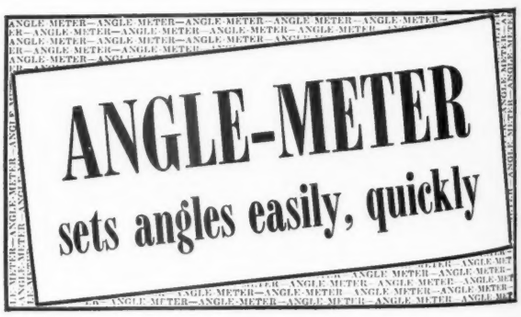
The Angle-Meter consists of two plates, between which is pivoted a transparent protractor, graduated to 45 deg. from either side of an 0 deg. graduation in the center. By means of the wing nut, the setting can be locked.

When cutting angles on a composing room saw from base meterial, it is advantageous to first saw considerably longer pieces than are needed, because it is easier to secure the exact degree with longer pieces. The long pieces can be sawed in two, so that one section will serve as the top or bottom of the angular mortise-like base.

Although the quadrant of the Angle-Meter carries the same degree markings as a regular protractor, these figures do not have to be used in angular work, because unknown angles may be transferred from copy to saw gauge. Only when the compositor is given written instructions by the markup man or artist does the compositor have to know the exact degree of the angle he is to saw. The compositor is thus enabled to go ahead with ad composition without seeing the original copy or photo-engraving.

After the degree of the angle has been determined by the simple setting of the Angle-Meter, the setting of the saw gauge is an equally simple operation.

The Angle-Meter is constructed of two metal plates, the outside dimensions being at an angle of 90 deg. Pivoted between the plates is a transparent protractor carrying the degree scale at its upper edge with 45 deg. range extending from 0 deg. in center to each outside edge. To use the instrument, it is laid upon the copy with one edge of the Angle-Meter parallel to one dimension of the copy, the angle of which is to be transferred to the saw gauge. The transparent protractor is now moved out until its edge coincides with the other dimension in the copy, then the wing nut on the casing is tightened to hold the protractor setting. The transparent protractor affords visibility in setting it to the proper angle as appears on the copy. The Angle-Meter is now taken to the saw. By placing one edge of the casing against the front edge of the sliding saw table, the saw gauge may be set to the angle indicated by the projecting protractor.



The angles of the panel shown here in reduced size, and the benday-like background, cut from line-composing machine slugs, were determined by using the Angle-Meter.

Announces Atlanta Office

A new sales office of the Champion Paper and Fibre Company has been established in Atlanta, Ga., at 1406 First National Bank Bldg. The office will be in charge of W. D. Gillespie and W. B. Huger. Reads Champion's announcement: "To provide better service to its customers through more intensive coverage, Champion will contact the South from three offices instead of two—St. Louis, Philadelphia and Atlanta."

Linograph Changes

The Linograph Company, a partnership, has purchased the Linograph Corporation. The principal partners in the new organization are R. R. Englehart and R. D. Englehart.

The avowed purpose of the Linograph Company is to expand production of the Linograph "50". Plans for the immediate future include a new factory building with an efficient production line. Adequate financial backing, it is stated, insures the successful completion of all projected expansion. Encouraging increases in recent sales are reported by the new Linograph management.

Plan now for your Holiday business rush—

A generous volume of Fall and Holiday advertising is just ahead! Now is the one right time to prepare for its economical and effective production in your composing room.

If you already are equipped to obtain the economy and efficiency of Ludlow-set display composition, we suggest that you check over your matrix equipment now to see what new typefaces you need to encourage your advertisers to use more display linage.

If you have not yet installed Ludlow equipment, we suggest that you will find it well worth while to investigate now the advantages the Ludlow offers any newspaper composing room.

The time to plan for the coming rush of advertising composition is before it descends upon you.

Specimens of the latest typefaces for display advertising, or full particulars regarding Ludlow advantages, will be gladly supplied on request, without the slightest obligation.

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Set in Ludlow Radiant Bold and Medium

THE PRESS THAT'S PUTTING MONEY INTO PRINTERS' POCKETS

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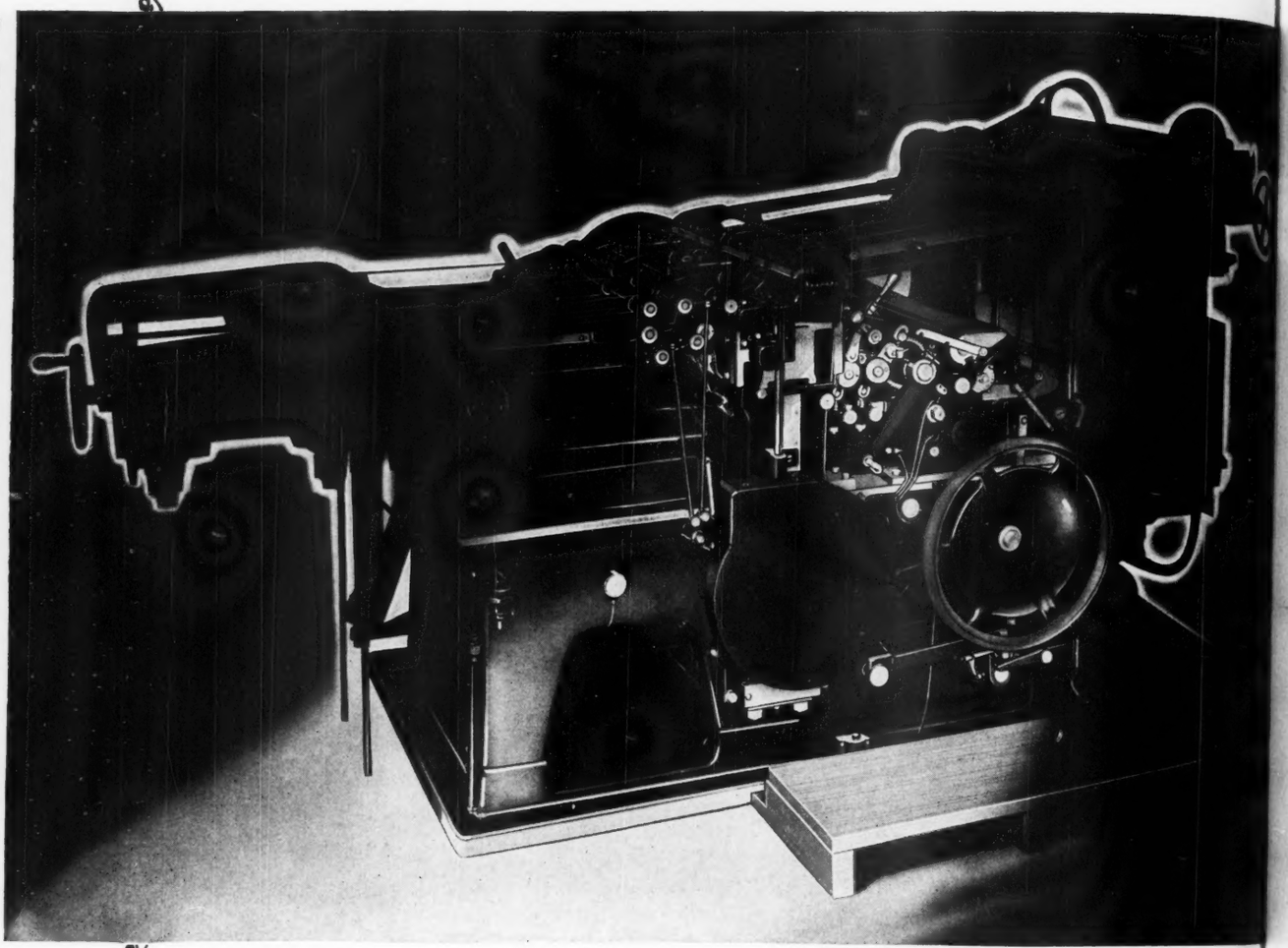

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- HANDBOOK FOR PRESSMEN — *By Fred W. Hoch.* Book written by authority on all phases of flat-bed letterpress production for the practical pressman. Contains 248 pages, 26 illustrations and 24 charts. $3 per copy, cash with order.
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Printing Equipment Engineer

LEADING ARTICLES

OCTOBER, 1940

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PRINTING EQUIPMENT *Engineer*, a monthly publication, Vol. 61; No. 1. Published at 1276 West Third St., Cleveland, Ohio Don Will, Publisher, MacD. Sinclair, Editor. Adam Henri Reiser, Associate Editor. Eastern Representative: Russ Birchfield, 509 Fifth Ave., New York, N. Y.; phone VAnderbilt 6-0890. Western Representative: E. P. Bloomster, 232 East Erie St., Chicago; phone SUperior 2444. Copyright 1940 by The Willsea Pub. Co. Subscription price per year, $3.50 in advance in U. S. A. Single copy current issues, 35c. Feature Issues $1.00. December Reference Issue, $1.00. Subscriptions in foreign countries, $4.50 in advance, U. S. currency. Printed in U. S. A.

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No washups with Velo Ink
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So instantaneously does Velo Cold Set Ink solidify that it is lifted bodily from the printing plates, leaving them clean after each impression. This complete transfer plus the fact that the ink cannot thicken, gum, or harden on the heated press, makes washups unnecessary except to change color.

Velo Cold Set Ink at ordinary temperatures is *naturally the solid* which other inks approach as they dry. By the application of low-temperature heat (approximately 200° F.) to the press—ink fountain, metal rollers, and plate cylinder—the solid ink is made fluid...only to solidify again instantly upon touching the cool (room temperature) paper.

Printing speeds are limited only by the top speed at which the web can be run, and no offset webs are needed... there is no penetration of ink into even the most absorbent papers, and fine-screen halftones can be printed on rough, absorbent stocks... the lead of the web through the press is not changed, and the paper is not subject to stretching, shrinkage, or strain ... fire and health hazards are eliminated.

Specimens of Velo Cold Set rotary press printing will be mailed at your request. Write to J. M. Huber, Inc., 460 West 34th St., New York. Branch offices in Chicago, St. Louis, Boston. Dealers in principal cities of the U. S. A. and foreign countries.

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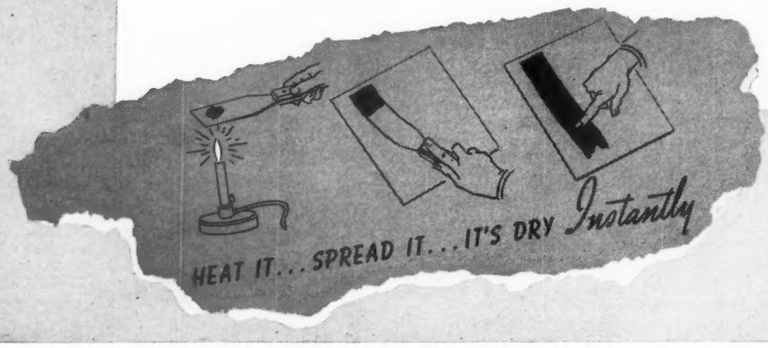

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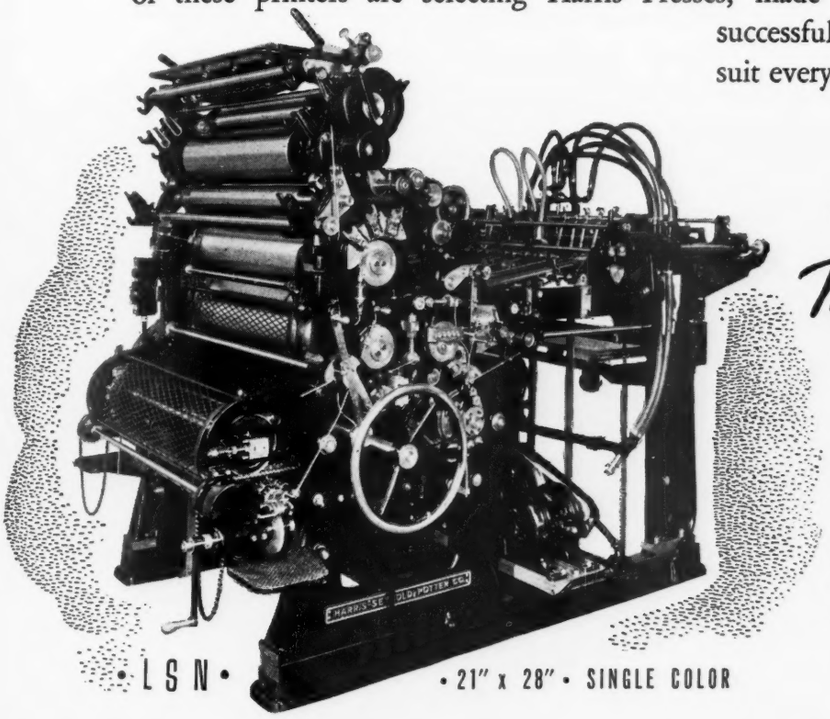
Printers are constantly widening their markets and rendering more service to their customers through the addition of Offset equipment. A large percentage of these printers are selecting Harris Presses, made by the pioneer builders of successful Offset equipment in sizes to suit every printing requirement.



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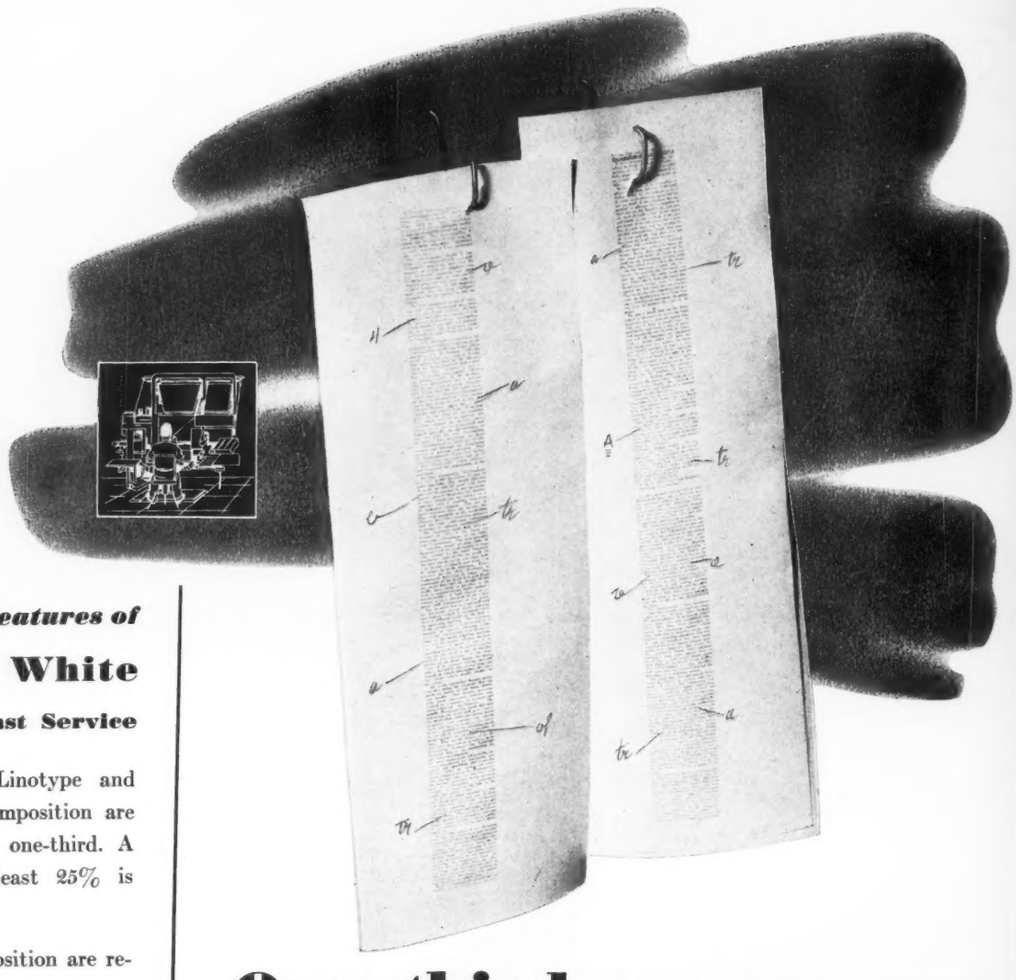

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Black & White
MATRIX CONTRAST SERVICE

Fluorescent Lighting...

Author discusses requirements for efficient lighting — Installing lights in present circuits — Why fluorescent lamps are cool

By HARRIS REINHARDT*

Commercial Engineering Dept., Hygrade Sylvania Corporation, Salem, Mass.

THE work of the printer is characterized by a multitude of severe visual tasks and it is not surprising, therefore, that the printing industry has been one of the first to recognize the possibilities of fluorescent lighting. The long length and low brightness of these lamps, together with the fact that they can be used to produce high levels of light of daylight quality without the use of excessive wattage or the generation of excessive heat, have all been found advantageous in meeting the lighting requirements of this industry.

The inadequacy of many of the lighting methods in common use in the printing industry has long been recognized both within the industry itself and by illuminating engineers who have been called upon to help in the solution of these problems. It is significant to note, for example, that the printing industry was one of the first to receive attention in a series of intensive research studies of lighting in various industries inaugurated by the Illuminating Engineering Society several years ago.[1] As a result of this study, which was carried on by a group of illuminating engineers in cooperation with representatives from the printing industry, it was found that many of the lighting problems of this industry require specialized lighting treatment. In the publication, *Recommended Practice of Industrial Lighting*, issued by the Society in 1939, these requirements are classified into a number of groups as shown in Table I.

Table I.—Lighting Requirements of the Printing Industry

Operation	Classification
Presses	Group C
Imposing Stones	Group A and D
Proof Reading	Group A

Group A: These seeing tasks involve (a) the discrimination of extremely fine detail under conditions of (b) extremely poor contrast, (c) for long periods of time. To meet these requirements, illumination levels above 100 foot-candles are recommended.

To provide illumination of this order a combination of at least twenty foot-candles of general lighting plus specialized supplementary lighting is necessary. The design and installation of the combination systems must not only provide a sufficient amount of light but also must provide the proper direction of light, diffusion, eye protection, and insofar as possible must eliminate direct and reflected glare as well as objectionable shadows.

Group C: The seeing task in this group involves (a) the discrimination of moderately fine detail under conditions of (b) better than average contrast (c) for intermittent periods of time.

The level of illumination required is of the order of 30 to 50 foot-candles and in some instances it may be provided from a general lighting system. Oftentimes, however, it will be found more economical and yet equally satisfactory to provide from 10 to 20 foot-candles from the general system and the remainder from specialized supplementary lighting. The design and installation of the combination systems must not only provide a sufficient amount of light, but also must provide the proper direction of light, diffusion, eye protection, and in so far as possible must eliminate direct and reflected glare as well as objectionable shadows.

Group D: The seeing tasks of this group require the discrimination of fine detail by utilizing (a) the reflected image of a luminous area or (b) the transmitted light from a luminous area.

The essential requirements are (1) that the luminous area shall be large enough to cover the surface which is being inspected and (2) that the brightness be within the limits necessary to obtain comfortable contrast conditions. This involves the use of sources of large area and relatively low brightness in which the source brightness is the principal factor rather than the foot-candles produced at a given point.

[1]See I. E. S. report published in May, June, July, Sept, and Oct. 1936, issues of *Printing Equipment Engineer*.

Before entering into a discussion of the use of fluorescent lamps to meet these requirements, it will be well to review some of the more important characteristics and advantages of this new light source.

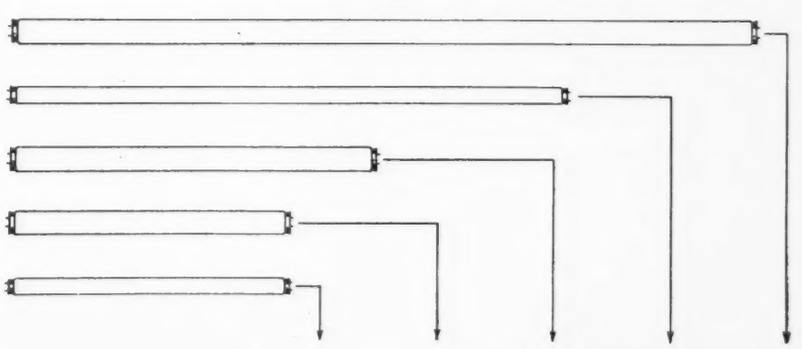
Fluorescent lamps are tubular in shape and are available in four effective lengths: 18, 24, 36, and 48 inches. The lamps are designed to consume 10 watts per foot of length, as indicated in Table II which gives the more important technical details of the lamps.

The lamps contain a small amount of mercury vapor at a very low pressure and the flow of electricity through this mercury vapor provides an efficient source of invisible ultra-violet radiation accompanied by a small amount of visible light. The inside of the tube is coated with fluorescent powder which converts the invisible ultra-violet rays into visible light. The color of this visible light depends upon the type of fluorescent powder used and in addition to the white and daylight lamps, as listed in the table, five colors: blue, green, red, gold, and pink are available. These lamps are highly efficient sources of colored light and are finding wide application in decorative lighting. The white and daylight lamps are of greatest interest for lighting problems such as those of the printing industry. The white lamp produces light which very closely resembles the light from the familiar incandescent lamp in appearance. Its efficiency of light production is somewhat greater than that of the daylight lamp and it is, therefore, usually preferred for applications where the daylight quality is not an important consideration. This greater efficiency is indicated by the lumen output figures as given in Table II. These figures are a measure of the total quantity of light produced by the lamps and if they are compared

(*Continued on Page 26*)

Table II.—Fluorescent Lamp Characteristics

Figure 1



Nominal Length	18 in.	18 in.	24 in.	36 in.	48 in.
Diameter	1 in.	1½ in.	1½ in.	1 in.	1½ in.
Nominal Watts[2]	15	15	20	30	40
Average Life (Hours)[3]	2500	2500	2500	2500	2500
Approximate Light output in Lumens					
White	585	585	900	1450	2100
Daylight	495	495	760	1250	1800

[2]Wattage of lamps only. Wattage loss in auxiliary equipment must be included to obtain total wattage.
[3]Average life under specified test conditions.

EMPLOYMENT
AND SERVICE

Employers, production and mechanical executives may insert notices in this department. Items may pertain to the following subjects: "Executive Wanted," "Association or Partnership Wanted," or "Position Wanted," readers referring to subjects of a personal nature such as obtaining information about addresses of executives, supplying copies of technical articles and magazines, patents for sale or requests for contacts for developing and/or financing of inventions.

Any reasonable request from an employer or mechanical executive for the printing of a notice upon a subject other than the ones listed above will be granted.

Notices may be printed under the following regulations: First insertion (maximum six lines) is free of charge. All subsequent insertions of the same item subject to a charge of 75c per line in advance.

Address all communications with box number to *Printing Equipment Engineer*, 1276 West Third St., Cleveland, O.

TRAINED MAN WANTED — Up to about 35 years with practical experience in one or more of printing or allied trades and with some engineering education and experience. To understudy in responsible position in large publishing company. Give full personal information which will be held confidential. Reply Box 101.

WANTED — Position as mechanical superintendent or day foreman. Composing room experience, expert machinist, familiar with both types of quadders. Educated. Age 37. Want chance to prove ability. Reference. Reply Box 102.

PRINTING CONSULTANT—Practical in letterpress and offset processes. Make surveys, plant layouts, studies of management, methods, costs, production, equipment and personnel. Reply Box 103.

PRESSMAN—Mechanical background; twelve years multi-color letterpress and rotogravure experience; three years foreman; hard worker. Reply Box 108.

LINE-CASTING MACHINE FOREMAN — 20 years experience, desires contact trade composition firm or commercial printers. Copy directing, estimating, marking. Good printer, far above average machinist-operator. Reply Box 109.

PRESSMAN-STEREOTYPER — Tubular equipment; 16 years present position, color experience, locate anywhere. Reply Box 104.

Published under this title in 14 in. by 20 in. folder form (maximum size which new Miehle Vertical 50 will accept), Miehle Printing Press & Mfg. Co., will send a copy together with floor plan diagram. Folder illustrates in two-color printing and describes range of work which can be done on the press.

In a little French fold 4 page folder, Eagle Printing Ink Co. announces Benedictine Brown printing ink which "ranges from the palest beige to that of bright brown."

BOOKS
RECEIVED

The Lithographer's Manual

THE most pretentious technical exposition of offset-lith methods to be published to date for general circulation seems to be the 368 page second edition of *The Lithographer's Manual*. Technological development in this industry during the past two years has been so rapid that it is important for plant executives especially to have an up-to-date source of technical information.

The Lithographer's Manual compiled by Walter E. Soderstrom, presents completely revised and new technical details *from copy to the finished job* — the camera, negative, graining of the plate, placing image on the plate, attaching plate to the press, press operation, selection of inks and papers.

Quite an array of well known writers and experts have contributed to the volume. Among these are Adam Henri Reiser, Associate Editor of *Printing Equipment Engineer*, who in collaboration with Chemist A. P. Reynolds, prepared the section on *Lithographic Production Procedure;* Alfred B. Rode, William C. Huebner, Theodore Hiller, who prepared the section on *Lithographic Camera Operations;* E. Byron Davis, Harry Porter, Charles W. Dickinson, Myron T. Monsen, Dr. Robert F. Reed, Joseph F. Lasky, John Stark and many other well-known experts.

Plant executives, superintendents, departmental foremen and journeymen will find the technical information in this book, especially with reference to the manipulation and operation of certain important equipments, up-to-date in every respect.

THE LITHOGRAPHER'S MANUAL — Compiled by Walter E. Soderstrom. Published by Waltwin Publishing Co. Size 8½ in. by 11¼ in. Bound in red cloth, gold stamped, 368 pages, 328 of which are devoted to actual technical material, including index; liberally illustrated. Price $5 per copy. May be ordered through *Printing Equipment Engineer*.

EQUIPMENT
SALES REPORTS

Stereo Installations

Recent sales of stereotyping equipment reported by the Wood Newspaper Machinery Corporation, Plainfield, N. J., include two heavy-duty Autoshavers and three vacuum casting equipments for Automatic Autoplate machines, to the Baltimore *Sun;* two Automatic Autoplates with vacuum equipment, two heavy-duty Autoshavers, and two single tail conveyors, to the Milwaukee *Journal;* one heavy-duty Pony Autoplate to the Richmond (Ind.) *Palladium-Item;* one standard Pony Autoplate, complete with vacuum equipment, to the Waterbury (Conn.) *American Republican;* one vacuum casting equipment for Junior Autoplate to the Jersey City *Journal*, and a similar equipment for an Automatic Autoplate to the Boston *Globe*.

The Wood Company also reports the sale of a standard reel with a full-speed, full-automatic Autopaster, to the Neo Gravure Printing Co., New York.

Reid Equipment Sales

General Manager Archie Reid reports that William Reid & Company have shipped recently a Reid-Hill Lift and a quantity of chases to the Birmingham (Ala.) *News* and *Age-Herald*.

Harris Press Installations

Einson Freeman Company of Long Island City recently added a new Harris 46x68, 4 color offset press to plant equipment. This lithographic house now has the largest, as well as other sizes, of Harris Presses.

Pierce Litho of Brooklyn also has added another Harris Press. The latest installation is a Model LSN 21x28 Harris.

The Harris-Seybold-Potter Company reports the following firsts in Offset Press installations. Beginning production in this field are: Stoman Printing, Ogden, Utah, with a Harris 17x22 Offset Press. Joe B. Klay, Tampa, Fla., with a 17x22 Harris Press. MacDonald Printing Company, Tampa, Fla., with a Harris LSB single color. Indio Publishing Company, Riverside, Calif., with a 17x22 Harris. The Herald Printing and Publishing Company, Monterey, Calif., with a new Harris 17x22

GPO Buys More Intertypes

The Government Printing Office, Washington, D. C., has installed eleven more Intertypes. All of the new machines are streamlined Model F Mixers, and all are equipped with the automatic quadding and centering device, including one specially equipped with the Intertype low-slug attachment.

These new Intertypes will be housed in the new annex to the main building into which most of the equipment of the G.P.O. has already been moved.

Stereotype Equipment Sales

Sta-Hi Corporation reports the following recent sales of Sta-Hi Master Formers: Detroit (Mich.) *Free Press* (2 machines), Milwaukee (Wis.) *Journal* (2 machines), Portland (Ore.) *Oregonian*, Buffalo (N.Y.) *Evening News*, and St. Louis (Mo.) *Commercial Color Printing Co.* A Sta-Hi Autoformer has been installed by the Havana (Cuba) *El Pais*, and Sta-Hi Junior Formers, equipped with Automatic Vacuum Shrinkage Attachment have been placed in the following plants: Hempstead (N.Y.) *Newsday*, Hamilton (O.) *Journal*, Newburgh (N.Y.) *News*, Washington (D.C.) *Mercury Press*. Orders for Sta-Hi Finaltrim Curved Matrix Shears have been placed by the Shreveport (La.) *Journal*, Milwaukee (Wis.) *Journal*, Detroit (Mich.) *Free Press*, Houston (Tex.) *Post*, Cleveland (O.) *Plain Dealer*. The Washington (D.C.) *Mercury Press* has purchased a Sta-Hi Vacuum Flat Casting Box.

Recent Linotype Installations

Three Blue Streak Linotypes have been added by the Excelsior Printing Company, Chicago.

One or more Linotypes, many of them with self-quadders, have been installed by the Navy Department, Washington, D. C.; Marquette University Press, Milwaukee, Wis.; Farm Bureau Spokesman, Grundy Center, Iowa; Hartford (Conn.) *Times;* Nazarene Publishing House, Kansas City, Mo.; New Orleans *Times-Picayune* and the *States;* Bakersfield (Calif.) *Californian;* Michael J. Gillespie, England, Ark.; Odessa (Tex.) *Daily Bulletin;* Youngstown (O.) *Buckeye Review;* Western Hills Publishing Company, Cheviot, O.; Cairo (Ill.) *Evening Citizen;* Observer Printing House, Inc., Charlotte, N. C.; Elkhart (Ind.) *Truth;* West Salem (O.) *News;* Esmond A. Grosz, New Orleans; Hagerstown (Md.) *Morning Herald* and the *Daily Mail;* Roswell (N.M.) *Daily Record;* New Bedford (Mass.) *O Independente;* Pioneer Press, Washington, D. C.; State College (Pa.) *Centre Daily Times;* Traverse City (Mich.) *Record-Eagle;* Belle Fourche (S.D.) *Bee;* Pfeuffer & Dibert, Pittsburgh, Pa.; Columbus (O.) *Citizen;* Bristol (Conn.) *Press;* Little's Printing and Stationery Company, Duncan, Okla.; Lewiston (Me.) *Daily Sun* and the *Evening Journal;* Nebraska City (Neb.) *News-Press;* Frederick (Md.) *News* and the *Post;* Grants Pass (Ore.) *Daily Courier;* Nampa (Idaho) *Free Press;* Dorris (Calif.) *Butte Valley Star;* Natchez (Miss.) *Press;* Naperville (Ill.) *Sun;* Troy (N.Y.) *Record* and *The Times Record;* The Little Print of New Rochelle, N. Y.; International Ticket Company, Newark, N. J.; Hope (Ark.) *Star*.

Photo-Gelatine Printing*

**Report of address given by Superintendent Henry Honus, Photo-Gelatine Dept., Morgan Litho Co., and Superintendent J. L. Roser, Reserve Litho & Printing Co., Cleveland, before Cleveland Club of Printing House Craftsmen.*

PHOTO-GELATINE printing occupies a field all its own, and as such there is a distinct place for it in the printing industry. It is primarily designed for the reproduction of pictures, art objects, movie placards, window hangers and display boards and the like in limited number where the copies wanted do not run into extremely large quantities. Average press runs range from 75 to 3500.

The practice of Collotypy is known by various names according to modifications in the process. Some of these names are photo-gelatine process, phototype, albertype, lichtdruck, artotype, heliotype, and probably a number of others. The process generally known as photo-gelatine printing is discussed here.

Partakes of Several Processes

The photo-gelatine process is unique in that it partakes of the offset-lith plate-making process, resembles in principle an intaglio plate, and on the press partakes of the letterpress method of printing. The plate-making operations up to the point where the placing of the image on the plate has been completed is offset-lith; the photo-gelatine "developing" or "etching" operation produces an intaglio plate. Unlike lithography, however, no damping mechanism is used while printing from the plate on the press. The nature of the plate coating is such that the printing image is ink receptive and the non-printing areas are ink repellent.

No screen is used at all in photo-gelatine plate-making. The printing image is continuous tone throughout just as in the photograph or art copy.

Reticulated Plate Surface

Another way to describe the printing surface of the plate is to say that the printing image is intaglio and the non-printing areas are raised above the printing image, *i.e.*, the plate is covered with reticulations (non-printing areas) obtained by swelling the gelatine *above* the printing image in a water and glycerine bath.

A photo-gelatine plate, as in an offset-lith plate, is aluminum. It is grained in the same manner, except that a fine grain is provided on the plate because the plate does not carry water. Wooden marbles and fine pumice stone are used in the graining operation.

After the aluminum plate is grained, it is coated with bichromated gelatine and placed in a plate whirler. The coating of a photo-gelatine plate is a slow operation and must be done carefully since the coating is much heavier than on an offset-lith plate.

The printing down of a negative for a one-color plate is similar to the technique used in offset-lith plate-making.

Color Plates

There are, of course, several methods by means of which photo-gelatine color plates may be produced. The "faking" method will be described here, since it is frequently used by photo-gelatine plate makers. In this method, only one negative is used from which the separate color plates are made. A sheet of thin cellulose acetate is placed over the negative. The side nearest the operator has been treated to provide a matt surface for holding the opaquing solution which will be painted on the cellulose acetate sheet. The complete plate area surrounding objects which are to appear in color are painted out on the cellulose acetate sheet, one sheet for each color. At this time, the one doing the opaquing provides the register marks for each color plate.

Printing Down the Plate

As has been stated above, the printing down of a negative upon a photo-gelatine plate is a similar operation to that of an offset-lith plate. The negative is placed in contact with the aluminum press plate in a vacuum frame and exposed to the arc lamps. The light hardens those parts of the light-sensitive bichromated gelatine plate coating as permitted by the negative.

Expressing the plate-making technique in different words, we will assume that the highlight, middletone and shadow areas of a picture on the photo-gelatine printing plate are made ink receptive according to the tone values. The highlight areas do not permit the passage of as much light through the negative when printing down the plate as do the shadow areas. Hence, the more light passing through the shadow area in the negative hardens the bichromated area underneath to a much greater extent than the bichromated gelatine under the highlight areas of the negative.

"Developing" the Plate

The plate is now washed thoroughly in water. Up to this point the plate-making procedure is the same as that used in offset-lithography. The plate still is planographic.

When the plate is immersed in water, the bichromate in the non-printing portions of the gelatine coating is washed out but the bichromate in the exposed or printing areas remains on the plate. It will be seen that bichromate which has not been struck by light is soluble in the water bath and is dissolved out of the gelatine coating.

The plate is then placed in a tank containing a solution of glycerine and water. In this bath the plate passes from a planographic to an intaglio plate, that is, the printing images which have been hardened by exposing the plate to the arc lamps in the vacuum frame do not swell, but the unexposed or non-printing areas which have not been affected by the arc lamps swell up above the light-hardened exposed parts. In other words, the placing of the plate in the glycerine and water bath causes a reticulation of the non-printing areas. The printing image depth is usually approximately 0.006 in. in the deepest parts.

Printing From the Plate

For photo-gelatine printing, a direct litho press with the water motion removed is used. The inking rollers and the paper upon which the design is to be printed come in direct contact with the plate. Composition inking rollers, usually, are used.

The raised gelatine portions (non-printing areas) of the plate containing a certain saturation of glycerine and water, are *ink-repellent*. The intaglio (printing image) of the plate is *ink-receptive*.

Best pressroom humidity for photo-gelatine printing is between 80% and 85%. The need for this high humidity will be apparent to those not familiar with the process when it is stated that glycerine is hygroscopic. The glycerine in the ink-repelling areas of the plate absorbs moisture from the air to keep the non-printing areas moist and ink repellant. Thus it will be seen that the glycerine-water moist plate areas function as a substitute for the plate damping mechanism on an offset-lith press.

On extremely dry days it may be necessary to stop the press occasionally to moisten the plate with glycerine. On days when the humidity is extreme, it is necessary to stop the press and remove some of the moisture from the plate with alcohol. During an extremely damp day when humidity is high, press production may be cut as much as 50%.

Inks for photo-gelatine printing are similar to any other ink but are highly concentrated. Partly for this reason and partly because of the suction set up by the intaglio nature of the plate when plate and paper separate, a highly calendered paper stock is used. Coated papers cannot be used because they will pick when plate and paper separate.

If all conditions are right (including proper pressroom humidity) a maximum of 10,000 impressions may be secured from a photo-gelatine plate. The average press printing speed is 3000 imp. in 7 hours or approximately 500 imp. per hr.

Plates are discarded after the job has been delivered.

A Copy Trick

In the plate-making process, where it is necessary to provide an elongation, distortion or a new perspective of an object which is to appear in the picture, such as a new model of an automobile or a battery for instance, the normal picture is printed by photo-gelatine on white rubber sheet. The sheet then is mounted in a special frame which permits manipulating the picture to a different perspective or distortion. A negative for the plate is then made from the new copy.

Mechanical Executives

of SNPA Eastern Division meet in Birmingham to discuss mechanical and production problems—Attendance is 300

SOME highlights of the September 1940 conference of the Eastern Division, Southern Newspapers Publishers Association Mechanical Conference, were searching questions propounded by Composing Room Superintendent C. Frank Mann of the Louisville *Courier-Journal* and *Times*, while acting as chairman of the Composing Room Section; a definite statement on stereotype molding depth and the cleaning of vacuum-back casting boxes by Stereotype Superintendent Harry Wilson of the Birmingham (Ala.) *News* and *Age-Herald;* a discussion on dispatch room operation by Fred Walker of the Louisville (Ky.) *Courier-Journal* and *Times*, and a description of a photo-engraving halftone relieving process by Production Manager R. J. Richardson of the Memphis (Tenn.) *Commercial-Appeal*. The method was developed by Photo-engraving Superintendent Louis Hess.

Approximately 300 newspaper mechanical executives and manufacturers' representatives attended the Conference which was held at Hotel Tutwiler, Birmingham, Monday and Tuesday, September 16 and 17.

Mechanical Superintendent Fred Connell of the Atlanta *Constitution*, presided as conference chairman but relinquished the gavel to the chairmen of the various departmental section chairmen during the technical sessions.

W. A. Carns, Mechanical Superintendent of the Birmingham (Ala.) *News* and *Age-Herald*, was chairman of the Birmingham Committee on Arrangements for the Conference.

Conference Banquet

Mechanical executives and their ladies were entertained at an elaborate banquet on Monday evening in the Peacock Room of Hotel Tutwiler. The banquet was sponsored by manufacturers' and suppliers' representatives. John L. Davis, New Orleans manager for Mergenthaler Linotype Company, presided. He was assisted by J. M. Fant, Atlanta office of Imperial Type Metal Company. Clayton Rand of *The Guide*, Gulfport, Miss., acted as master of ceremonies. Speakers included Mr. Rand; James G. Arrington of Collins, Miss.; Russell H. Greene of Howard Flint Ink Co.; R. E. Steel of American Type Founders, Chattanooga, and C. S. Reilly of the Goss Printing Press Company. Following the banquet, the floor was cleared and a dance was held.

Composing Room Section

AFTER the opening formalities were over, General Chairman Fred Connell called upon Composing Room Superintendent C. Frank Mann to preside over the Composing Room Section of the program.

Mr. Mann, in referring to the current observance of the Five Hundredth Anniversary of Printing from Movable Types, stated that perhaps the greatest change coming about in the five hundred years since the invention of printing is the value of time.

Said he: "Our tools are better and our materials are more accurate, but in consequence the industry has grown to the extent that we have high overheads and our operating expenses are very much greater. The outstanding problem of the composing room is to solve the riddle which is influenced tremendously by the condition of the materials furnished by the tributary departments and by the time factors involved. One way is to develop respect for minutes."

Problems Needing Answers

As the result of many visits paid to composing rooms on a recent tour, the speaker stated there were a number of problems common to newspaper composing rooms which yet remain unsolved. Among these are (1) All-slug method of composition as compared to the hand-set or mixed hand-set and slug composition. The speaker finds that many good composing room executives have their personal reasons, which seem to be good ones, for favoring every system. (2) All composing room men are concerned about meeting the publisher's desire to publish a better newspaper as efficiently as possible concurrently with the trend toward new makeup styles, which necessitate using various type measures. (3) Ways are needed for efficient handling of the ad load which varies from a few columns to as high as 300 columns in one or two days a week. (4) Local conditions make necessary a special study regarding composing room

(*Continued on Page 20*)

Executive Mechanical

Committee Personnel

(SNPA Eastern Division)

The plan of membership rotation for the executive-mechanical committee of the S.N.P.A. (Eastern Div.) Mechanical Conference provides that three members retire each year. Three new mechanical executive members are elected. Committee membership is for a three-year term. Following is the 1940-1941 committee personnel:

Chairman of the Committee—Composing Room Superintendent Claude L. Baker of the New Orleans (La.) *Times-Picayune*.

E. O. Aslinger, Manager Engraving Dept., Greensboro (N.C.) *News-Record*.

W. B. Astor, jr., Stereotype Superintendent, Memphis (Tenn.) *Commercial-Appeal*.

H. R. Capps, Chief Machinist, Jacksonville (Fla.) *Times-Union*.

Fred Connell, Mechanical Superintendent, Atlanta *Constitution*.

Henry M. Duke, Mechanical Superintendent, Charleston (S.C.) *News* and *Courier-Post*.

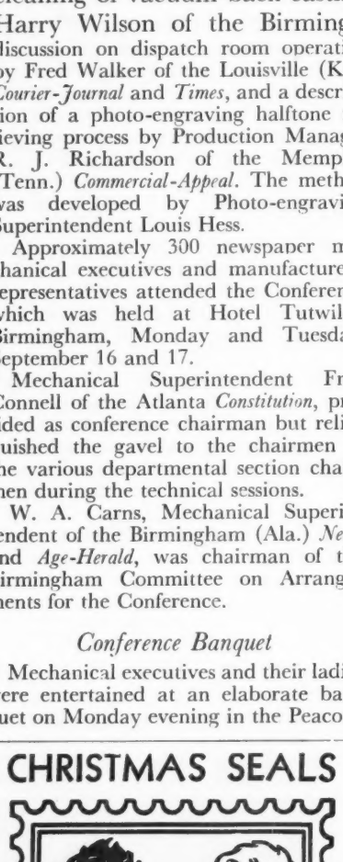
I. J. Gardner, jr., Composing Room Superintendent, Chattanooga (Tenn.) *Times*.

R. R. Fulton, Pressroom Superintendent, Roanoke (Va.) *Times* and *World-News*.

C. Frank Mann, Composing Room Superintendent, Louisville (Ky.) *Courier-Journal* and *Times*.

The 1941 meeting will be held in Louisville, Ky., in the early part of September.

CHRISTMAS SEALS



Help to Protect Your Home from Tuberculosis

EXECUTIVE GROUPS AT SOUTHERN CONFERENCE

Newspaper mechanical executives and manufacturer representatives mingled freely at the Birmingham (Ala.) mechanical meeting of the Southern Newspaper Publishers Association on September 16 and 17. Here are a number of pictures by P-Double-E's photographer. We are indebted to Composing Room Superintendent O. E. Petry of the Nashville (Tenn.) Banner-Tennessean for the upper right-hand picture.

Upper left: Fred Connell, Mechanical Superintendent Atlanta Constitution; J. Luther Wright, Foreman Composing Room, West Palm Beach Post-Times and John O. King, General Sales Manager Ludlow Typograph Co.

Upper right: Carl Jeffres, State News Editor and L. C. Penry, Mechanical Superintendent, both of Greensboro (N.C.) News-Record.

Second from top: W. Y. McKenzie, Foreman Composing Room, News-Free Press, Chattanooga, Tenn.; E. T. Niles, Niles & Nelson, Inc.; I. J. Gardner (Retired), Dean of Mechanical Superintendents, Chattanooga (Tenn.) Times; O. E. Petry, Supt. Composing Room, Banner-Tennessean, Nashville, Tenn.

Third from top: (sitting) Fred Connell, Mechanical Superintendent, Atlanta (Ga.) Constitution; C. Frank Mann, Composing Room Superintendent Courier-Journal and Times, Louisville, Ky.; (standing) Walter H. Morgan, Day Composing Room Foreman, Banner-Tennessean, Nashville, Tenn.; A. W. Johnson, Composing Room Supt. Lexington Herald-Leader, Lexington, Ky.; James R. Dwyer, Night Composing Room Foreman, Banner-Tennessean, Nashville, Tenn.; M. F. Alexander, Head machinist, Banner-Tennessean, Nashville, Tenn.; Walter C. Johnson, Secretary-Manager SNPA, Chattanooga, Tenn.

Lower picture: (Front Row) R. W. Bailey, Veeder-Root Inc., Hartford, Conn.; Ellis Speer, Foreman Composing Room, News and Observer, Raleigh, N. C.; Miss New England; Jesse L. Sharp, Superintendent Stereotype Room, Banner-Tennessean, Nashville, Tenn.; Scotty Campbell, New England Newspaper Supply; Back Row: (Left to Right) Arthur Dressel, R. Hoe & Co., Inc.; C. H. Lowe, Night Foreman Stereotype Room, Banner-Tennessean, Nashville, Tenn.; Walter D. Hitch, Burgess Cellulose Co., Freeport, Ill.

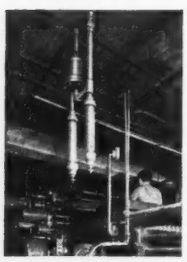
Clean, Dry Air an essential in printing plants using compressed air for controls, cleaning machinery, sprays, air guns or air brushes

By OSCAR W. LILLIEDAHL*

*Chief Engineer, Logan Engineering Company, Chicago, Illinois.

COMPRESSED air is an essential in every printing plant of any size at all. It is used in all of the mechanical departments and is also used in those plants supporting an art department. If a printing plant is large enough, compressed air is supplied from a central system and is piped to the various departments, in each of which convenient service outlets are provided.

Now the chief difficulty with a compressed air system in many plants is that the air delivered to the service outlets in each department may be contaminated with moisture, oil used in lubricating the compressor seeping through to the lines or just plain dirt particles drawn in through the compressor intake. Naturally, this contaminated air may and does cause trouble by way of rusting fine machinery, coating machine parts with both moisture and oil when neither is desirable. In the case of artists' and retouchers' air brushes, it is easy to see that contaminated air will spoil art work. In the photo-engraving department where plates are dried by compressed air, the oily residue can be the cause of mischief. Air cleaning units, it can be seen, are a necessity. A unit of sufficient capacity may be mounted immediately after the storage tank in a centralized compressor system, or units of suitable capacity may be mounted just ahead of point-of-use for individual operation.

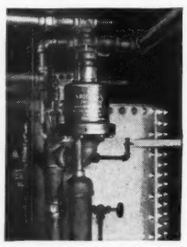


In the city of Chicago, Newman-Rudolph Lithographing Company's pressroom is provided with clean, dry compressed air. Moisture condensate, oil and dirt are removed from air lines by the air cleaner unit shown mounted 10 ft. above one of the presses.

In the plant of the Chicago *Times* an air cleaning and drying unit was installed in the air line by Maintenance Superintendent C. A. Pregler. This unit is similar to those used in industrial plants for removing moisture and oily residue. After installing the unit it was found that moisture condensation, oil and dirt were removed effectively with no appreciable back-pressure in the line and without adding any perceptible burden to the compressor. The unit was placed close enough to the receiver (storage tank) so that the first take-off from the main line was provided with clean, dry air.

A condensate trap with transparent sight gauge mounted at the side of the aridifying unit was installed so that moisture and oil removed by the aridifier will flow into the trap, the gauge indicating when the trap should be emptied.

Some printing plants suffer from wet air troubles more than others. Much depends upon the amount of air used during each twenty-four hour period, the natural humidity content of the air taken into the compressor, the low temperature of the intaken air in relation to the higher temperature of the air in the storage tank, the length and branching of the lines and the location of the compressor air receiver (storage tank).



At the Chicago Times, this Aridifier removes moisture from compressed lines and deposits it by centrifugal force in the trap shown at bottom of picture. This particular unit takes care of the Times's entire compressed air system.

A Chicago lithographing plant which formerly had experienced trouble with contaminated air installed an air separator directly ahead of the point where the air is used about 10 ft. above its printing presses. This unit, reports an executive of the company, gives satisfactory service.

Pressmen Case Barents and William Anderson, at Kalamazoo's Barnes Printing Co., consult "Pressroom Dopes," the new No. 2 bulletin just issued by the E. J. Kelly Co., Kalamazoo, Mich. Bulletin contains information on printing inks, materials necessary to adjust them in pressroom and proper uses. "Pressroom Dopes" is free for the asking.

English Matrices Interchangeable

Because of incorrect reports to the contrary, Lanston Monotype Machine Company of Philadelphia states that all English Monotype faces designed for machine typesetting are available for use by American and Canadian Monotype owners, and orders for such matrices may be placed with and will be filled by Lanston Monotype Machine Company.

All English faces available for machine typesetting in sizes up to 12 point, inclusive, may be set on standard American Monotype typesetting machines. A short taper centering pin and the keyboard equipment made for each face are required.

English Monotype matrices made for casting type up to and including 36 point can also be cast on the standard American Monotype display typecaster and require a short taper centering pin and a special matrix holder.

Have You Checked Your Chases Lately?

RECENTLY, the story about the modernization of both building and equipment of the Syracuse (N.Y.) Post-Standard *was published in* Printing Equipment Engineer. *We hope the item about the chases did not escape the attention of our newspaper mechanical executive readers because we feel that accurate chases are important to better printed newspapers. Included in the material purchased by the* Post-Standard *were fifty new steel chases.*

After having been used over a period of years, newspaper stereotype chases are no longer type-high. Perhaps, too, the frames are no longer at right angles. It is possible that there may be several different makes of doubtful vintage as well as dimension in your composing room—all of which add up to the stereotyper's difficulties in producing precisely uniform plates. Have you checked your *chases lately?*

For Specimens of Cottrell Press Production see any news stand

Cottrell EQUIPMENT

SHEET-FED PRESSES. One to five colors in one operation. Standard sizes up to 59x84.

WEB PRESSES. One to six colors in one operation on one or both sides of the web. Sheet delivery — with cut-off before or after printing — or rewind. Magazine presses with folder or sheet delivery.

SPECIAL ROTARY PRESSES. For continuous printing of bread wraps, labels, etc., and for paper box printing of various kinds. One to five colors in one operation.

BAG PRESSES. For printing on paper, cotton, burlap, etc. Hand-fed or with automatic cutting, feeding, and folding. One to five colors in one operation.

ROTOGRAVURE PRESSES. For magazine printing, mail order and catalog work, etc., including printing on cellophane, foil, etc. Monotone or multicolor. With folder, cut-off and flat delivery, or rewind.

CUTTING AND CREASING presses.

FOLDING MACHINERY. For high-speed rotary magazine presses.

CLAYBOURN PLATE-MAKING EQUIPMENT

Non-stretch bending machines, curved plate precision shavers, curved plate (solidifying) finishing machines, curved plate proof presses, curved plate reforming machines, curved plate routers, and curved plate finishing tools.

Registering and lineup system for rotary presses, lead and mat moulding presses, combination roughing and shaving machines, flat plate proof presses, and single and multicolor proof presses.

Claybourn diagonal groove patent base and registering hook system, special spiral grooved cylinders for use with the Claybourn rapid register hooks, spiral grooved cylinders for the conventional hooks, and flat plate lineup and registering system.

Cottrell

Illinois Mechanical Conference . . .

THE Illinois Newspaper Mechanical Conference met in Springfield at the Leland Hotel, Saturday, September 28 to Monday, 30. One hundred and thirty-six Illinois, Iowa, Wisconsin, and Indiana newspaper executives from engraving, press, stereotype and composing rooms were registered.

President Harold Mintun, Production Manager of Decatur Newspapers, Inc., opened the Sunday morning meeting by introducing V. Y. Dallman, editor the *State Register*, who made the welcoming address.

A. W. Shipton, Publisher of the *State Journal*, talked briefly on *What the Publisher Expects from the Mechanical Departments*.

James Fitzgibbons of E. G. Ryan and Company talked informally on *Offset Newspapers, Their Development and Possibilities*. Forty-one offset weeklies and three dailies have been started in the last three years. Three years ago it required from three to ten days to make plates. It now takes but 15 min. to make the average plate.

President Harold Mintun made a brief talk suggesting the keynote of the meeting be a critical inventory of ourselves and our jobs. He called attention to the changing systems of operation and the new inventions of which we should take advantage. He spoke of the importance of the four "M's"— Men, Machines, Material and Methods.

Sunday afternoon technical groups met to talk about their particular profession. Composing room men met with W. J. Baldwin of the Peoria (Ill.) *Star* as chairman; press and stereotype, E. L. Bailey, Alton (Ill.) *Telegraph*, Chairman; machinists, Harry Pottle, Western Newspaper Union, Chicago, chairman; photo-engravers, E. J. Andrews, Decatur *Herald and Review*, chairman.

Jack Thompson of the Monomelt Company of Minneapolis, led the entertainment at the banquet Sunday evening.

Monday Morning

The Monday morning session opened with President Mintun calling the group to order at 9:30. He introduced Editor John Allen of the *Linotype News*, who spoke on *The Modern Newspaper*.

Typographic modernizing, he said, began twelve years ago. The unit count, which was partly responsible for semi-streamlining resulted in the flush left head style. To be effective, this must be presented with readable types, and unrelated type faces should be cut down. The reader should not be conscious of the type. Caps and lower case intrude the least.

Mr. Allen said good spacing was 90% of composition. The space between sentences should be no more than between words. Color and character in the page may be obtained by using a few two or three-column heads under the fold. Italics, as well as bold face should be used for emphasis only. The letter should be leaded out to be more readable. Since the newspaper is oblong, fidelity to style demands that boxes remain oblong. Nor are side rules necessary since column rules will take care of the rule. Date line rules should harmonize with head type.

There is a distinct trend toward larger body types. Because the story should be short and concise, and of course colorful, this is a definite aid to readers since much of the reading is done on bus, street car and train.

It is Mr. Allen's belief that the tabloid size paper, which has definitely more color, is on the up-trend. By way of conclusion, he said he believed that only six fonts were necessary to maintain a complete new head schedule.

Harold Hoots and Martin Cooney of the Decatur *Herald and Review*, presented a full color film which they had taken themselves, giving a graphic description of the photo-engraving process.

The afternoon concluded with reports of group chairmen, reports of com-

(*Continued on Page 46*)

Illinois Newspaper Mechanical Conference Delegates at Hotel Leland, Springfield, September 28 to 30

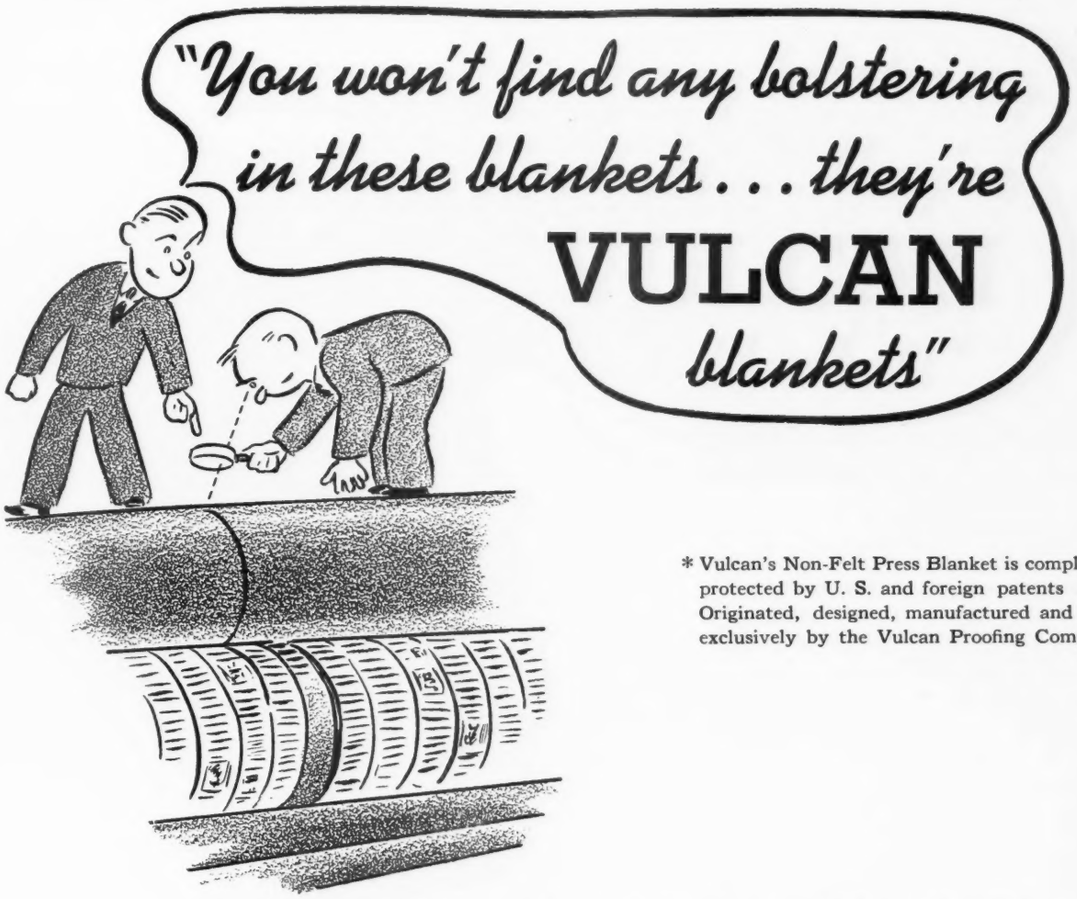
Upper left: Sid Scott, Urbana Courier; Charles Johnson, Monomelt Company; George Pearce, Elgin Courier; Ben Wilie, Springfield.

Upper right: Fred A. White, Chicago Linotype Manager and Speaker John E. Allen, Editor, Linotype News.

Lower left: Sam Wiggins, Decatur Herald and Review; Otto Kurrle, Moline Dispatch; Russell Myers, Springfield Register; Harley Mintun, Peoria Star. All of these men are stereotype executives.

Lower center: Ralph Moore, Chicago Agency, Intertype Corporation.

Lower right: W. A. Carpenter, Burgess Cellulose Co.; Howard M. Colton, Bloomington Pantagraph; Victor E. Fishburn, Burgess Cellulose Co.



* Vulcan's Non-Felt Press Blanket is completely protected by U. S. and foreign patents . . . Originated, designed, manufactured and sold exclusively by the Vulcan Proofing Company

THAT'S RIGHT . . . there's no bolstering in Vulcan Non-Felt Press Blankets . . . no indentations of any kind, even if plates are left on the press over night.

Vulcan Blankets save trouble in other ways, too. They do not "creep" on the cylinders (because of the way they are made and the type of fabric used), and they are absolutely oil-proof.

Vulcan's No. 67 non-felt top blanket and No. 76 cork underpacking is a BALANCED combination. It gives you a firmer packing, which means better printing, yet it has the compressibility and "come-back" necessary to compensate for normal variations in plate thickness.

It all adds up to less trouble for the pressroom and less expense for the firm. Write for details and recommendations.

VULCAN PROOFING COMPANY

First Avenue and Fifty-Eighth Street, Brooklyn, New York

REPRESENTATIVES IN PRINCIPAL CITIES

VULCAN

Press Blankets and Inking Rollers

Stereo Mat Trimmer Head Rule Gauge

By GEORGE FULLER*

*Stereotyping Superintendent, The Cleveland (O.) *Press*.

ONE of the most important dimensions in the trimming of stereotype mats, if not the most important, is the edge parallel to the head rule of a daily newspaper page. Parallelism of the edge with the head rule is sometimes difficult to obtain because in the trimming operation, unless the stereotyper is holding the mat firmly against the back gauge of the trimmer, as well as down upon the table, the knife will skew the mat out of alignment with the head rule. Another hazard is that unless the stereotyper is extremely careful when aligning the mat with the usual molded-in scribe marks, the edge of the mat will not be trimmed parallel with the head rule.

Every stereotyper wants to furnish plates to the pressroom which have a constant parallel distance from the edge of the plate to the head rule. In a 24-page paper there are just 24 chances for variations at the head of the plate where the scribe marks are used to align the head of the mat with the cutting edge of the trimmer table. To overcome this condition, the gauge shown in the illustrations was devised and attached to our mat trimmer.

As will be seen, the gauging toes are embedded in the molded-in head-rule depression of the mat under a slight springy pressure. This clamping action assures a parallel condition extending from rule to trimmed edge, and also prevents skewing while the knife is cutting the mat.

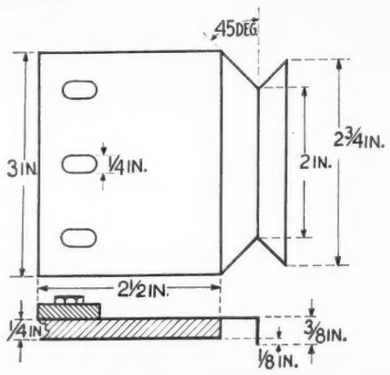


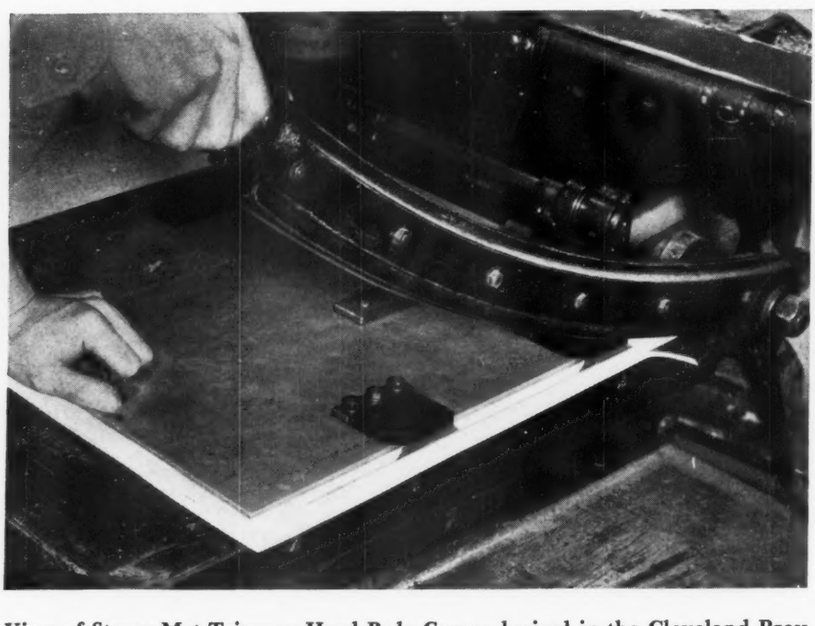
Diagram showing dimensions of the adjustable gauging pieces for the Stereo Mat Trimmer Head Rule Gauge discussed by Mr. Fuller in the accompanying article. The gauge pieces are cut from discarded stereotype tail sheets, grain running the 2½ in. way to permit bending down the gauging edge or toe. The three elongated ¼ in. holes permit adjustment. The screws used are ¼ x 20 hex. hd.

Construction of the gauge is simple. A piece of aluminum, ¼ in. thick, by 18 in. wide by 20 in. deep is hinged to a shaft mounted in ball bearings at the back of the cutter table. The right edge of the aluminum gauge plate is mounted ⅝ in. from the trimming edge of the table.

To provide a strong bearing for the aluminum plate, two hinges were applied. These were made from ¼ in. by 1¼ in. cold rolled steel. The hinges extend over the plate approximately 9¾ in.

The two adjustable gauging pieces are mounted along the right side of the aluminum plate. They may be placed as fancy dictates with respect to the up-and-down position in relation to the aluminum plate. The dimensions for these gauging pieces are shown in the accompanying diagram. They are made from discarded steel tail pieces which are rather springy to provide a positive pressure of the gauging pieces upon the molded depression of the head rule in the mat.

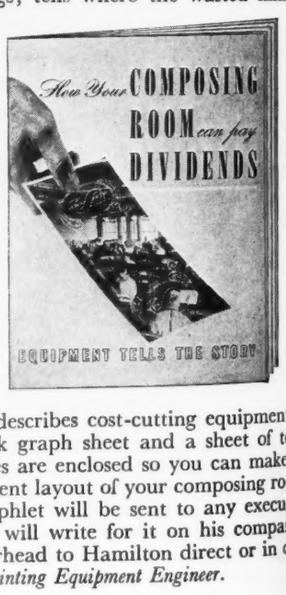
The gauge not only permits constant parallel trim of the head end of the mat but it also provides uniform dead metal at the head of the plate, a thing which is appreciated by the pressroom superintendent. We have found that this gauging device has improved the accuracy of our stereotype plates.



View of Stereo Mat Trimmer Head Rule Gauge devised in the Cleveland Press stereotype department. The gauge is used to position the head rule end of the page mat in relation to the trimmer knife so that the trimmed mat edge will be parallel to the head rule. As will be seen, the gauge toes are embedded in the molded-in head rule and not only insure uniform dead metal at the head of the plate, but also prevent skewing of the mat while the knife is cutting it.

Composing Room Dividends

Hamilton Mfg. Co. has published a booklet, *How Your Composing Room Can Pay Dividends*. The booklet tells you your composing room is an individual problem; your profits depend upon two things; tells where the wasted minutes go; describes cost-cutting equipment; a blank graph sheet and a sheet of templates are enclosed so you can make an efficient layout of your composing room. Pamphlet will be sent to any executive who will write for it on his company's letterhead to Hamilton direct or in care of *Printing Equipment Engineer*.



MORLEY'S NEW TRUTONE NEWSPAPER MAT a Real Advance in DURABILITY!

Here it is! The product of research work that has been going on at Morley for many months — the Trutone newspaper mat. More depth and less fracture at the molding machine. Decidedly better durability in the casting box. In fact, we believe that it is the real answer to your individual mat problem

WHAT'S MORE THE NEW TRUTONE MAT OFFERS IMPROVED • • •

MOLDABILITY AND PRINTABILITY

It gives a deeper, cleaner mold with minimum pressure.

It brings greater definition of detail to its subject, produces clear, sharp impressions.

YOU ALREADY KNOW THAT MORLEY MATS HAVE ALWAYS BEEN STRONG ON

- **DRYING QUALITIES** — they're faster scorching to save time when time is precious. Compare the new Trutone mats with others in a stop-watch test.
- **STAYBACK** — ample for minimum amount of packing yet not too much for easy manipulation of mat.
- **COLOR** — a good contrasting shade, easily visible, that speeds your backing-up work.
- **SHRINKAGE CONTROL** — tailor-made to your particular needs.

SEND FOR SAMPLES OF THIS NEW IMPROVED MAT

THE MORLEY COMPANY
Portsmouth, N. H.

Please send me free samples of your new Trutone mat. I require

_____gauge _____shrinkage _____number of casts

*Company*_____

*Individual*_____

*City*_____ *State*_____

SOUTHERN CONFERENCE

(*Continued from page 12*)

operations to either fit the equipment into the copy flow or the copy flow into the equipment. (5) Store proof time, charging for alterations to advertisers, reading of proofs before being sent to advertiser. (6) Lack of co-ordination among editorial, advertising and mechanical departments. (7) Upkeep costs of composing room equipment.

The speaker concluded that "No production problem can be ultimately solved without taking into consideration local conditions first, which brings us right back to the necessity for getting all the information we can from the other fellow and working it into our own program."

Composing Room Question Period

Chairman Mann then took up the stated question program which had been prepared in advance. The first question was asked from the composing room viewpoint: *What is the advantage in using type-high stereo casts as compared with shell casts?* The question resolved itself into a discussion about the costs of producing both. Mechanical Superintendent L. C. Penry of the Greensboro (N.C.) *News-Record*, stated type-high casts are more expensive to produce. Additional help in the composing room is not required, but he was in agreement that more help might be needed in the stereotype department. In reply to a question by Mechanical Superintendent W. A. Carns of the Birmingham *News* and *Age-Herald*, Chairman Mann stated that type-high casts were no more expensive in his plant because of the manner in which they are handled. Stereotype Superintendent Harry Wilson, also of the Birmingham *News* and *Age-Herald*, asserted that type-high work costs more than shell casts and would call for more employes in his department. He outlined his method of routing work to the composing room and stated that when the shell casts were trimmed and mounted they were delivered to the composing room ready for the makeup department. Chairman Mann feels that this is a problem for the individual paper but so far as the *Courier-Journal* is concerned type-high casts are preferred and are used.

Getting the copy in earlier was suggested as the remedy for the problem of small papers in handling advertising copy on the one-day peak (Friday), although Composing Room Superintendent Claude L. Baker of the New Orleans *Times-Picayune* stated this is a problem which confronts all papers, big and little. Mr. Baker also stated that with the exception of the larger ads he sent out unread proofs to advertisers. The larger ones he does try to have read before being sent to the advertiser. In reply to Mr. Penry's question as to whether he (Mr. Baker) assumed responsibility for the proofs which had been read, Mr. Baker said "No."

W. A. Carns, Claude Baker, Mechanical Superintendent John P. White of the Charlotte (N.C.) *Observer*, and several others, discussed advertisers' proof alterations. All were agreed that abuse of the privilege added to composing room costs but that the policy of charging for store alterations was a question for the publisher to decide. The consensus of opinion seemed to be that a solution could be found in cooperation rather than in penalties for alterations.

Composing Room Superintendent George Stone of the Atlanta *Constitution* stated that one man should operate both machines on a small daily using two Ludlows. One man can assemble the necessary type which would permit the other man to do something else.

At this point, Fred Walker of the Louisville *Courier-Journal* discussed *The Dispatch Room or Control Desk*. He outlined operation of the dispatch room in the Louisville paper's plant under the subject *Contact Between Advertiser and Newspaper*. His discussion of the services afforded by his paper's handling methods was most complete. It is apparent that the handling of the many details incidental to receipt of advertising copy to final publication in the Louisville *Courier-Journal* and *Times* is strictly under control.

Southern Conference Exhibitors

Bridgeport Engraving Supply Co., Cincinnati, O.
Dayton Rubber Co., Dayton, O.
Hammond Machinery Builders, Kalamazoo, Mich.
Imperial Type Metal Co., Chicago, Ill.
Ludlow Typograph Co., Chicago, Ill.
Milwaukee Saw-Trimmer Co., Milwaukee, Wis.
Monomelt Co., Minneapolis, Minn.
New England Newspaper Supply Co., Worcester, Mass.
H. B. Rouse & Co., Chicago, Ill.
United American Metals Corp., Brooklyn, N. Y.

Some discussion was entered into about composing room costs by Production Manager R. J. Richardson of the Memphis (Tenn.) *Commercial-Appeal;* Chairman Mann, Claude Baker and J. Luther Wright of the West Palm Beach (Fla.) *Post-Times*. Chairman Mann volunteered to tell about his composing room cost system at next year's conference in Louisville.

Engraving Section

SUPERINTENDENT J. W. Calmback of the Birmingham *News* and *Age-Herald* photo-engraving department, presided at the engraving section of the mechanical conference program.

With respect to deadlines for receiving copy of advertisements ranging from one to four colors, the photo-engraving executives present entered into a lively discussion.

Charles J. Conrad, Photo-engraving Superintendent of the New Orleans *Times-Picayune*, said that two plates could be easy or difficult to produce but could be done in two days. Because advertisers do not get art work promptly, the establishment of a deadline and its enforcement constitutes a problem. He said the key plate causes the greatest loss of time but suggested that the plates be made in the order which will conserve time.

Engraving Superintendent Ray J. Walker of the Atlanta *Constitution*, said the making of the plates on time not only is dependent upon the artist furnishing copy in time but also is dependent upon how involved the work happens to be and the number of men one may have available for the job. Mr. Walker stated the *Constitution*[1] employs 26 men. The force could do a two-color job in two hours and produce the regular work at the same time.

Again taking the floor, Mr. Conrad asserted the engraver should have four full days in which to produce four-color work.

E. O. Aslinger of the Greensboro (N.C.) *News-Record* engraving department, told about the difficulty of too much copy coming in on Saturdays. After talking the matter over with buyers and ad men, he arranged for some of the color copy to reach his office on the previous Wednesday. This arrangement relieved the production pressure greatly. Mr. Aslinger thinks deadlines are not strictly enforceable under all conditions.

R. J. Walker of the Atlanta *Constitution*, stated he used flash lamps because they are less expensive than other equipment. J. A. Parish of the Nashville *Banner-Tennessean*, stated that previously when he used the white paper flash, the flashing time ran 1 min. and over, but with a flash lamp the time is cut to less than 30 sec. on a 75 line screen.

Relating to the topic about the causes of film negatives curling when stripped and experience with restripping aids, E. O. Aslinger discussed a bath formula of water and citric acid which would eliminate the trouble. This mixture, when poured on the plate causes the negative to remain flat, he also suggested that re-stripping not be a hurried operation — the plate should be well soaked — and care should be exercised. Harold Larsson of Chemco Photo-Products, New Orleans, stated curling may be due to too much alum in the bath, an unclean or greasy glass or a glass with too high a temperature. The temperature should be watched at all times.

Mushy dots in the print, stated Chairman Calmback, are caused by underprinting.

The Human Element

The human element seems to enter into securing uniform results when more than one man makes negatives. Ray Walker of the Atlanta *Constitution*, stated that among the four photographers in his plant it was difficult to standardize their work. He agreed with Chairman

[1]The *Constitution* does a considerable volume of commercial work including cuts for the Associated Press.

Max Fowler, Publisher, The Frankfort Morning Times, Frankfort, Ind., says - - -

. . . . . "With our Hammond EasyKaster "8" we have reduced our casting time 60% . . . and are saving $66 a year in fuel" . . . . . .

EK8 - P
HAMMOND
EASYKASTER "8"

The Hammond EasyKaster will actually reduce your casting time as much as 50%. The Frankfort (Ind.) Morning Times reduced their casting time 60% with their Hammond EasyKaster "8".

SAVE at least an hour or two each time you heat up your casting box . . . SAVE waiting while remelting additional metal between casts . . . SAVE holding the press for those last minute ads . . . SAVE hand ladling, walking to box and hand pouring . . . SAVE wasted time recasting because of dirt or dross in face of cast.

There is no "stop and go" with the Hammond EasyKaster "8"—rather, continuous casting with the 800 lb. valve-controlled melting pot.

Hammond Machinery Builders INCORPORATED
KALAMAZOO, MICHIGAN, U.S.A.
1604 DOUGLAS AVENUE

Calmback that it is difficult to get two men to see the negatives alike. He believes that if one can get the operator and printer together better results will be secured.

In comparing results when using one-bite powder or roll-up etching, Charles J. Conrad said three or four bites are used in his plant. In Elmer Aslinger's plant, plates are handled both ways and plates can be rolled in a couple of minutes. Sometimes, however, engravers do not use sufficient care in handling roll-up plates.

Production Manager R. J. Richardson of the Memphis (Tenn.) *Commercial-Appeal*, discussed a halftone cut relieving process used in his plant by Photo-engraving Superintendent Louis Hess. Mr. Richardson stated that he was not familiar with all of the technique of the process. At the enthusiastic insistence of several photo-engraving executives, Mr. Richardson promised that Mr. Hess would send a complete account of the method to Secretary-Manager Johnson for publication in one of the SNPA Bulletins.

Stereotyping Section

J. S. BLACK, Stereotype Superintendent of the Tampa (Fla.) *Tribune*, presided as chairman of the Stereotyping Section of the program.

A large order was contained in the first topic for discussion. This had reference to standardization of stereotype equipment in the hope that standardization of procedure might be led to eventually. Stereotype Superintendent Floyd Elrod of the New Orleans *Times-Picayune*, feels that it would not be possible to bring about such a condition within the industry. He pointed out the investment in present equipment in different plants and the various methods used in those plants.

Molding Depth

In answer to the question, *What is proper depth of mold?* Stereotype Superintendent Harry Wilson of the Birmingham *News* and *Age-Herald*, speaking from the standpoint of his many years experience in the craft, feels that the proper molding depth of a stereotype mat is that which may be attained without cracking the mat. He stated that a soft cork will fracture the mat, but if the molding depth is down to the shoulder, it would be correct. Mr. Elrod stated that the answer to this question is largely one of individual preference. He pointed out that pressure is the main factor and must be applied carefully. Said he: "You can go just so far and no further in this operation at best."

When Chairman Black introduced the question: *Which is best*, direct or roller type molding? several executives joined in the discussion. The speakers seemed to be in agreement that direct pressure molding is superior. When compared in the light of production costs, it developed that those executives taking part in the discussion feel the roller type molding is more costly as compared to the direct pressure method and that greater costs are not viewed favorably by management at this time in any department.

Stereotype Superintendent Floyd Elrod of the New Orleans *Times-Picayune*, explained the exacting methods which should be employed in order to register a set of stereotype color plates. He described in detail a registering device upon which he had been working. He said the principal problem, of course, is to register the plates accurately so they will register properly on the press without make-ready time. Off-register of the plates in the press will show if shrinkage in the mat isn't watched carefully.

Chairman Black and Messrs. Fred Connell, Floyd Elrod and Capps participated in the discussion brought about by the question as to whether a rotary blade planer, a flat or straight shaver would produce more straight cuts per hour. After Mr. Elrod advocated the rotary type there was general agreement as to satisfactory operation of the rotary blade machine.

The removal of dross from stereotype pots should not be done more often than once a week or at ten-day intervals. It was also suggested that some dross should be retained on pots and metal should not be skimmed more often than necessary. These remarks seemed to represent the consensus of opinion from the discussion participated in by Wade Grice of the Atlanta *Constitution*, Floyd Elrod and J. L. Sharpe, Stereotype Superintendent of the Nashville *Banner-Tennessean*.

Cleaning Vacuum Backs

Is there any convenient method for cleaning out vacuum backs on Junior Autoplates? was the next question. Messrs. Harry Wilson of the Birmingham *News* and *Age-Herald* and Ralph Buvinger of the Wood Newspaper Machinery Corporation, collaborated in replying. Soft wire should be used to punch out the vacuum holes. A steel punch should not be used. In some plants compressed air is used to clean out the holes. The force of vacuum used in vacuum back boxes is gauged by the thickness of the mat.

Standardization of stereotype mat thickness to 0.032 in., 0.028 in. or 0.026 in. to assist the stereotyper was next announced for discussion. Floyd Elrod said that varying thickness of mats caused trouble from time to time. He stated emphatically that mats should be of the same thickness. It does not matter whether the mat is 0.028 in., 0.030 in. or 0.032 in. thick but a uniform standard thickness would be effective. He thought syndicates could remedy the matter and buyers should bring it to the attention of the mat makers. R. E. Hill of the Birmingham *News*, and Wade Grice use different kinds of mats but are in agreement that the same thickness would help the stereotyper greatly. Mechanical Superintendent John P. White of the Charlotte (N.C.) *Observer*, stated that since a casting box can be arranged for any thickness mat that the trouble in variations rests on the mat makers. In his plant, 0.032 in. thick mats are used but he declared standardization of thickness would be helpful. Henry M. Duke, Mechanical Superintendent, Charleston (S.C.) *Post-Courier*, thinks, that to a great extent, the question concerns the individual — some men prefer one thickness while others differ.

Floyd Elrod stated that excessive shrinkage could be traced back to the mat maker and that he should be consulted to correct the trouble, although in some cases, the trouble may be caused by too much heat.

Pressroom Section

GEORGE A. ROSENGREN, Pressroom Superintendent of the Memphis (Tenn.) *Commercial-Appeal*, had been scheduled to function as chairman of the Pressroom Section but was unable to attend the conference. In his place, Pressroom Superintendent W. L. Knighton of the Birmingham *News* and *Age-Herald*, presided.

The first question up for discussion was: *If you raise your plates from 0.4375 in. to 0.441 in., what effect will it have on the travel of the sheet and blankets?* Pressroom Superintendent R. B. Hackman of the Atlanta *Constitution*, stated that the answer to this question is largely in the kind or nature of the plates furnished the pressroom. He stated he was getting excellent results with 0.441 in. thick plates. Pressroom Foreman F. B. Bivins of the Birmingham *Post*, stated his experience with plates of increased thickness has been satisfactory. Peter Prassinos, Pressroom Superintendent of the New Orleans *Times-Picayune*, L. M. Phillips of the Charleston *News* and *Courier-Post*, Pressroom Foreman Virgil M. Potts of the Chattanooga (Tenn.) *Times*, Pressroom Superintendent G. F. McWhorter of the Nashville *Banner-Tennessean*, all participated in the discussion and gave their opinions respecting blankets.

In discussing the type of blanket that will hold register best when running color, Peter Prassinos of the *Times-Picayune*, did not express much preference for one particular kind of blanket over another except to state that hard blankets hold register better than soft types. He supplemented his remarks by stating that loose tension of the rolls and press speeds enter into the problem. Other pressroom executives did not exactly agree with Mr. Prassinos. G. F. McWhorter said he uses rubber as well as felt without drawsheet. This combination holds register better and he does not have trouble with offset. Pressroom Foreman Charles Neigel of the Mobile (Ala.) *Press-Register*, asserted that the condition of the paper rolls such as flat rolls or a loosely wound roll, may cause trouble by interfering with proper register.

Some discussion was entered into by several pressroom executives as to the crawling of blankets on the cylinder. Pressroom Superintendent R. B. Hackman of the Atlanta *Constitution*, said certain types of blankets will crawl, felt blankets being the most likely. Fred C. Hudson of the International Printing Pressmen's Union, discussed the tendency of certain types of blankets to creep

(*Continued on page 35*)

The Answer To America's Demand For Better Printing

The KLUGE AUTOMATIC PRESS

With Kluge's Patented "Selec-Tone" Inking System

BRANDTJEN & KLUGE · INC.
MANUFACTURERS · SAINT PAUL, MINNESOTA

Second Conference of New England newspaper production and mechanical executives fully developed — Generous attendance anticipated

By FRANCIS M. BRITTON*

*President of New England Mechanical Conference and Production Manager, Nashua (N.H.) *Telegraph*

AS was announced in the September issue of *Printing Equipment Engineer*, the Second Annual New England Newspaper Mechanical Conference will be held at the Hotel Statler, Boston, Saturday, Sunday and Monday, October 19-21. Since publication of the announcement further program details are available. After the success of the first conference held at New London last October, which was really an experiment to see if such a conference would be well received in New England, the officers and committeemen are looking forward to a greater success than was even hoped for when thirty-odd men gathered in Nashua in May, 1939.

The Program Committee under Bernie F. Garrity, Production Manager of the Hartford (Conn.) *Times*, has arranged a really inviting program topped off by three speakers for the Sunday afternoon session.

Program

John M. Masterson of J. M. Huber, Inc., will talk on the development of Velo cold-set ink and will give highlights on the production of *PM*, having worked with the producers of this new New York tabloid daily newspaper during its experimental stage. Walter Patterson of the Mergenthaler Linotype Company will speak on *Newspaper Legibility*. The final talk of the afternoon will be given by I. Tornberg, of Wood Newspaper Machinery Corporation, who has selected as his subject, *Technology and Craftsmanship in the Newspaper Plant*.

The clinics which are to be held Sunday morning at 9:30 o'clock will be conducted on a little different principle this year. Each chairman will have three or four key men on the platform and as each question is presented he will call on one of these men to answer it. It will then be discussed from the floor if anyone has anything further to say or a difference of opinion.

Banquet

The banquet will be held Sunday at 1 o'clock in the main dining room of the hotel at which time certain guests will be introduced and probably a welcome address will be given by one of the Boston publishers. The speaking program will follow immediately after the dinner in the same room.

Officers, directors and members of the program committee will meet Sunday evening to prepare the digested reports and connecting questions from the Clinic meetings to be presented at Monday morning's session.

A registration desk will be opened on the mezzanine floor at 3 o'clock Saturday afternoon and remain open during the evening and Sunday morning until noon. Badges will be issued.

Herbert T. Stanger, Production Manager of the *Christian Science Monitor*, and Chairman of the Committee on Arrangements, arranged with the hotel to provide space for an exhibit on the mezzanine floor.

Clinic Chairmen

Following are the names of Clinic chairmen: Composing Room: William Madden, Worcester *Telegram-Gazette;* Stereotype: Ernest Gifford, New Bedford *Standard Times;* Photoengraving: Burt B. Mader, *Christian Science Monitor;* Pressroom: Harry E. Zerbe, Lawrence, Mass.; Tubular Press and Stereotype: Glen S. Magoon, Fitchburg *Sentinel*.

The Tubular Clinic for both stereotypers and pressmen of plants that have this type of equipment is a new feature that has been greeted with enthusiasm and will undoubtedly prove a popular attraction to men from tubular plants.

Russell Stapleton of the Advertisers' Engraving Company of Providence will give a short talk on the fluorescent dropout system at the photo-engravers' clinic. Mr. Stapleton is probably better acquainted with this subject than any other man in this part of the country.

Program Chairmen

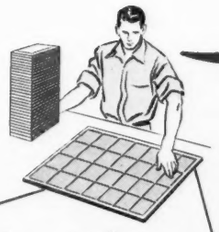
The full Program Committee is as follows:

B. F. Garrity, Chairman.
Richard M. Fitzgerald, Worcester *Telegram-Gazette*.
Herbert T. Stanger, *Christian Science Monitor*.
John J. Mahoney, Holyoke *Transcript*.
Glen S. Magoon, Fitchburg *Sentinel*.
C. A. Staley, New Haven *Register*.
Howard Dunsing, Brockton *Enterprise*.
F. M. Britton, Nashua *Telegraph*.

The president of the conference will preside over the Sunday afternoon meeting and the Monday sessions. Many committee meetings have been held during the summer. Nothing is being left undone to make this conference worthwhile from a technical standpoint.

Some of the Newspaper Mechanical Executives Who Are Helping Put Over the Second New England Newspaper Mechanical Conference

Standing, left to right: Composing Room Clinic Chairman William Madden, Composing Room Superintendent of the Worcester (Mass.) Telegram-Gazette; Glen S. Magoon of the Fitchburg (Mass.) Sentinel was chairman of the Tubular Press and Stereotype Clinic meeting; Ernest Gifford, New Bedford (Mass.) Standard Times was Chairman of the Stereotype Clinic; Howard Dunsing, Stereotype Superintendent of the Brockton (Mass.) Enterprise. Seated, left to right: Jack Branick, Hartford (Conn.) Times and John Bullman, Newspaper Pressroom Superintendent, Worcester (Mass.) Telegram-Gazette.



OLD WAY
Form consists of small individual plates, requiring individual lock ups, individual make ready, longer press time, double cutting time, excessive paper waste.

. . . . WHICH IS MORE ECONOMICAL TO PRODUCE IN YOUR SHOP?

. . . Now consider economies of Quality Step and Repeat Molded Plates . . . at right!

You want more profit from each job without sacrificing quality. You *will* take advantage of definite economies if they prove to be sound and if no additional investment in equipment is necessary.

LARGER PROFITS FROM LONG RUNS:
Greater Savings than you believe possible!

NEW WAY
Quality Step and Repeat Plates eliminate small individual plates by grouping labels or subjects on one large plate. More labels or subjects can be grouped on one sheet; better and faster line up and register are assured. Savings will surprise you!

● **We can prove** without a question of doubt that Quality Step and Repeat Molded Plates offer you the biggest opportunity you have today to reduce your production costs—the length of your runs—your overhead —your cutting and paper costs, without investing a penny or changing your present shop methods.

Large Letter Press Printers all over the country have been using Quality Step and Repeat Molded Plates for several years and have effected tremendous savings which you cannot afford to overlook. This remarkable proved method of reproducing an almost unlimited number of labels or other subjects on a **single** large printing plate is sweeping across the country and has saved thousands of dollars. And this **single** printing plate, combining all the individual reproductions, is actually **pre-made-ready** for exact surface uniformity.

Better and faster line up and register are assured, unlimited color combinations may be employed for curved or flat plates. Quality Step and Repeat Molded Plates (Pat. App. For) are not an experiment and we urge you to write for samples and complete information which will thoroughly convince you. Thousands of dollars were invested to perfect this remarkable new method of plate making which gives you, for the first time, every advantage of lithography plus the flexibility of letter press printing. Many of the users listed on this page have used Quality Step and Repeat Molded Plates for dozens of jobs and are enthusiastic about them.

We will also send you complete information regarding a new process for absolutely non-stretch Curved Plates, if requested.

LIST OF OUTSTANDING PRODUCERS WHO USE QUALITY STEP-AND-REPEAT MOLDED PLATES

- Grant Paper Box Co., Pittsburg, Pa.
- U. S. Printing & Lithographing Co., Cincinnati and Branches
- Multi Color Type Co., Cincinnati
- Richardson Taylor Globe Corp., Cincinnati
- Gardner Richardson Co., Middletown, O.
- American Coating Mills Co., Elkhart, Ind.
- Dittler Bros., Atlanta
- U. S. Playing Card Co., Cincinnati
- National Label Co., Philadelphia, Pa.
- Kellogg Co., Battle Creek, Mich.
- National Label Co., Cincinnati, O.
- Champion Paper & Fibre Co., Hamilton, O.

THE QUALITY ENGRAVING & ELECTROTYPE CO.

CINCINNATI • ESTABLISHED IN 1914

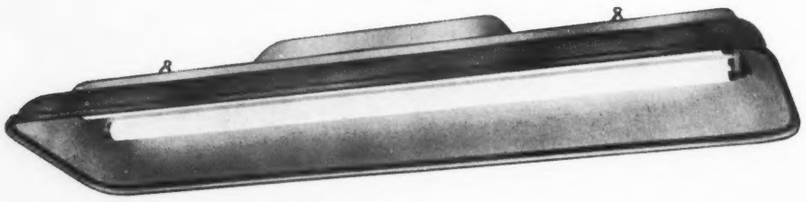


Fig. 2 — Porcelain enamel trough type reflector employing two 40 w. Fluorescent Lamps.

FLUORESCENT

(*Continued from Page 9*)

with similar figures for incandescent lamps it will be found that the efficiency of the white fluorescent lamp is from two to three times as great as that of incandescent lamps of comparable light output.

Control Equipment for Fluorescent Lamps

Modern fluorescent reflecting equipment is wired ready for use on alternating current circuits of standard voltage and the user of this equipment does not have to concern himself with the details of the electrical control equipment used in connection with the lamps. As a matter of general interest, however, it might be pointed out that this auxiliary equipment is essential in the operation of these lamps and that the preferable type of auxiliary incorporates the controls for two lamps in a single case. These units are known as the two-lamp type and are provided with a "power factor correcting" feature which keeps the losses in the wiring used to supply current to the reflector at a minimum, and also connects the "stroboscopic" or flicker effect which might otherwise prove objectionable under certain circumstances.

Each lamp also requires a small automatic switch or "starter." In modern types of reflecting equipment this starter is mounted in a readily accessible position so that it can be easily replaced if any trouble is experienced.

General Lighting with Fluorescent Lamps

Returning now to a consideration of the more important lighting requirements of the printing industry as outlined in Table I, it will be noted that the operations classified as Group A require a general illumination of 20 foot-candles supplemented by local lighting designed to produce 100 foot-candles or more over the important work areas. The fluorescent lamp offers an effective means of meeting both of these requirements.

For the general lighting the most commonly used lighting reflector employs two 40-watt lamps mounted in a porcelain enamel trough-shaped reflector. Porcelain enamel acts as a highly efficient reflecting surface, produces good diffusion of the light, and is easy to keep clean. A reflector of this typs is illustrated in Fig. 2.

Under average conditions 20 foot-candles of general illumination will be produced if reflectors of this type, equipped with white flourescent lamps are mounted from 10 to 12 feet from the floor and spaced approximately 10 feet apart so that the area per unit is approximately 100 square feet.

To meet the local lighting requirements, reflectors of this same type mounted closer to the working area may be used. Fig. 3. shows the illumination produced by a reflector mounted at various heights above the working surface. It will be noted that because of its large size this reflector covers a relatively large area, and in some instances reflectors which use lamps of a smaller size may be needed. Where a higher degree of concentration is desired, in order to produce a high level of illumination over a relatively small area, a reflector which employs a specular reflecting surface such as Alzak aluminum should be used.

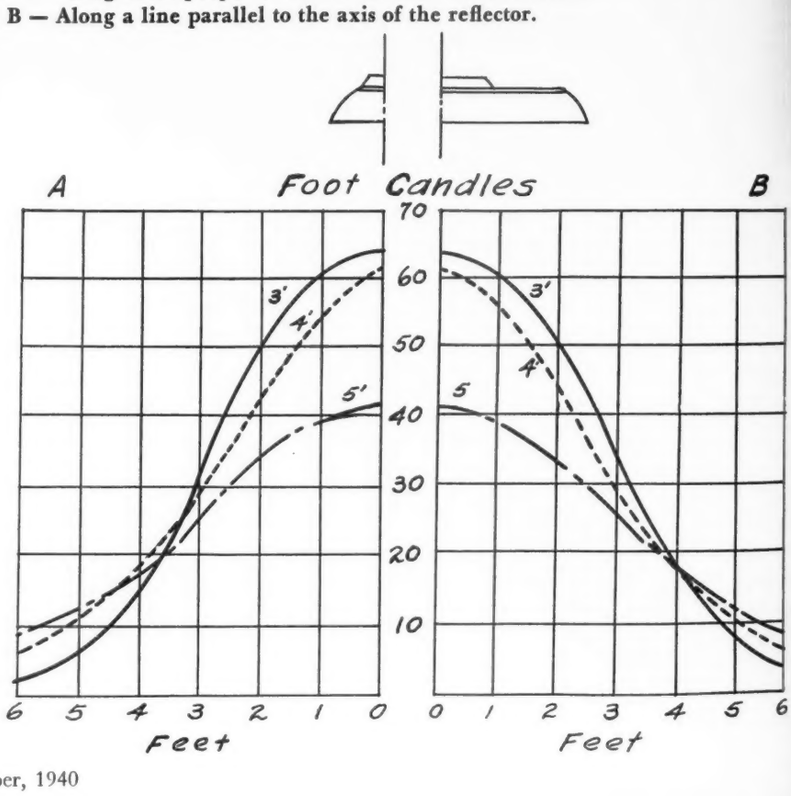
Lighting of Imposing Stones

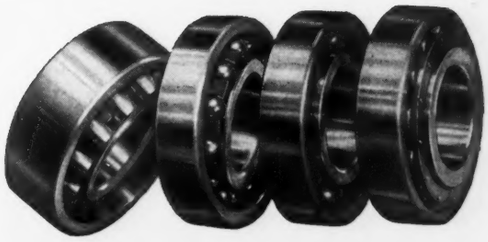
To meet the requirements of imposing stone illumination, Class D in Table I, a source of low brightness which is large enough in area to cover the working surface should be used. The large size and low brightness of the fluorescent lamps makes them admirably suited to applications of this nature. In order to produce a larger area of uniform brightness, a unit in which the lamps are mounted behind a diffusing glass panel will be found most satisfactory. A reflector of the type previously discussed in connection with general lighting applications can be readily adapted to this application by providing a diffusing glass cover.

Use of Fluorescent Lamps on Existing Wiring

The high efficiency of the fluorescent lamp has been used to particular advantage in buildings where an increase in the illumination level is desirable, but cannot be obtained by increasing the wattage of the incandescent lamps unless additional wiring capacity is provided. Since a change in the existing wiring may frequently be quite expensive, the advantages of avoiding the necessity of such a change are obvious. As an example of the effectiveness of fluorescent lamps in solving this problem, consider an area which is lighted to a level of 6 foot-candles by 100-watt incandescent lamps in porcelain enamel reflectors spaced ten feet by ten feet and connected to concealed wiring which is loaded to capacity. By substituting a

Fig. 3 — Illumination produced on horizontal planes at various distances below a trough type reflector employing two 40 w. White Fluorescent Lamps.
A — Along a line perpendicular to the axis of the reflector.
B — Along a line parallel to the axis of the reflector.





THEY STAND UP . . . THE SKF BEARINGS ON THIS GOSS MATRIX ROLLER

A BEARING can create havoc in the commercial production of dry mats. For if it *can't* take the heavy loads imposed by tremendous pressures in the molding of fine screen cuts . . . if it *can't* stand up under years of hard service . . . it ties up production, holds up profits, and runs up operating costs in general.

So Goss uses SKF Spherical Roller Bearings on the cylinders of this 45U Matrix Roller—the one on the lower cylinder opposite the drive end having a split outer ring for preloading which takes care of the thrust from the slow speed worm gear of the double reduction worm drive. On one end of the reduction worm drive, there's an SKF deep-groove ball bearing—on the other, an SKF double row angular contact bearing.

That's why this machine has a smoothly operating mechanism that never stops for bearing trouble throughout a long life under the severest usage. YOUR machines can do the same thing—if you equip them with SKF Ball and Roller Bearings. 4676

SKF INDUSTRIES, INC., PHILADELPHIA, PA.

BUILT BY THE GOSS PRINTING PRESS CO.

SKF

BALL & ROLLER BEARINGS

unit which uses two 40-watt fluorescent lamps and is provided with a two-lamp control unit, the load on the wires will be practically the same, but the illumination will be increased to approximately 20 foot-candles.

It should be emphasized that a scheme of this kind is only practical if the fluorescent lamps are provided with

Fig. 4 — Fluorescent trough unit in use in the illumination of an offset printing press.

power factor correction such as is incorporated in the two-lamp controls mentioned in the above example. Otherwise there will be an appreciable increase in the current flowing through the wires when the change to fluorescent lamps is made.

Cool Light

Fluorescent light has been characterized as cool light. There are two reasons why a fluorescent lighting installation will be cooler than an incandescent installation producing an equal level of illumination in foot-candles. In the first place, the total wattage required to produce the given foot-candle level with fluorescent lamps will be only about one-half that required with the incandescent lamps because of the higher efficiency of the fluorescent lamps. Since the total wattage consumed by the lamps is ultimately dissipated in heat, the fluorescent installation is cooler for this reason. The manner in which the heat is dissipated from the two sources is quite different, however. In a 100-watt incandescent lamp, for example, the total radiated energy is about 80% of the total energy consumed by the source. This means that the light (which represents about 10% of the total energy consumed by the source) is accompanied by a large amount of invisible radiant energy which is dissipated as heat when it strikes various objects in the room including the occupants and their immediate surroundings. With the fluorescent lamp, on the other hand, only about 50% of the total energy is radiated and the remainder is dissipated at the lamp itself, and not in the immediate vicinity of the occupants of the room. In general, this will not produce as much discomcomfort as radiated heat. This coolness of the fluorescent light is of particular importance in instances where a very high level of light of daylight quality is required, since the excessive heat produced in applications of this kind employing incandescent lamps has been one of the most objectionable features.

Artificial Daylight with Fluorescent Lamps

The daylight fluorescent lamp is the most efficient light source which has ever been developed for producing light which approaches natural daylight in color. It thus offers a means of producing a high level of light of daylight quality over large areas without the use of excessive wattage or the production of excessive heat.

In the past the most common method of producing artificial daylight was the use of blue glass filters with incandescent lamps. Since these filters absorb a large percentage of the light, it is necessary to use a very high wattage if a high level of illumination is desired over a large area. The heat produced by an installation of this kind may be very objectionable. For this reason, most artificial daylighting installations in the printing industry have been confined to relatively small areas, and the conditions with respect to contrast and reflected glare have frequently been far from ideal for accurate visual work. The fluorescent lamp, because of its high efficiency and coolness, offers the ideal solution to this problem in many instances.

Natural daylight is subject to such wide daily and seasonal variations that it has been necessary to set a standard for the daylight color to be achieved in an artificial source. A color temperature of 6500°K has been established as this standard, and the daylight fluorescent lamp is designed to produce light having this color temperature. Before any extensive installations of the daylight lamps for color work is undertaken, however, it is wise to begin with a small experimental installation to make certain that light having this color temperature and other characteristics is satisfactory for the particular operations involved.

Cost of Fluorescent Lighting

A question which frequently arises with regard to fluorescent lighting is this: Will the cost of lighting a given area with fluorescent lamps be less than the cost of supplying equivalent lighting with incandescent lamps?

The factors which enter into the cost of lighting vary so widely in different localities and in different organizations that it is impossible to give a general answer to this question. However, it might be pointed out that the combined action of a number of factors have brought about very significant reductions in the cost of fluorescent lighting within the past few months. These factors include improvements in the life and lumen output of the lamps as well as reductions in the prices of lamps, control units, and reflecting equipment. Calculations based on present day figures for all of the above and with reasonable assumptions regarding the other factors, indicate that fluorescent lighting may be economical for general industrial lighting for power rates as low as one cent per kilowatt hour.

These calculations are based on the cost of supplying an equal level of illumination from the two sources. It should be emphasized, however, that the lighting results cannot be regarded as "equivalent" on any other basis, in fact, most of the applications of fluorescent lamps which have been made in the printing industry have been purchased because of one or more of the advantages of this type of lighting rather than on an economic or cost of light basis. Now that the cost has become more attractive, however, it may be expected that the advantages of fluorescent lighting may be extended to numerous other applications where it was not previously felt that they could be justified.

Summary

Fluorescent lamps have been found to be suitable for many applications in the printing industry and are of particular advantage in installations having any or more of the following requirements.

1. *Light of Daylight Quality.*
2. *A Large Source of Low Brightness.*
3. *Cool Foot-candles.*
4. *A high efficiency source which will permit an increase in lighting level on circuits where an increase in wattage is not possible because of limited wiring capacity or other conditions.*

Offset Platemaking Products

The Fuchs & Lang Mfg. Co. Division of General Printing Ink Corporation announces three new products for offset-lith production use as follows:

U-NEEK — An offset plate coating solution which is claimed to cut down printing time, gives long press runs and approximates deep-etch plate qualities.

LESTOIL — A detergent for dissolving the ink which the dampening rollers have accumulated. Claimed to be practically neutral, non-inflammable, non-toxic, and does not cause skin irritations.

TOUGH STUFF GRAINING MACHINE LININGS — Eliminates difficulty in graining plates of thin gauges, where the abrasive works under the metal and the weight of the marbles kinks the sheets or makes them wavy. With heavier plates similar trouble occurs when the bottom of the graining box becomes worn and uneven. A rubber graining bed lining has been developed to eliminate these difficulties.

LETTERS TO THE EDITOR

OCCASIONALLY we hear about the printing plant executive who has treated a manufacturer's or supplier's representative discourteously at the time of business calls. I am one of those persons who believe these men are entitled to every courtesy by the executives upon whom they call. All of us have learned a lot from them about our particular calling. But—

Just like in any other subject under discussion there are two sides. I have in mind now the occasional fellow who, before calling, seems to determine the time when the most important edition of the day is to start in the pressroom. He enters, parks his fanny in your chair, and greets you with the remark: "Now, don't pay any attention to me at all. I'll just sit here and wait until you have a few spare moments."

At the time of getting the edition going in the pressroom there is considerable pressure. Even if the storm clears and you do have a breathing spell before the edition is finished, how can one be honestly cordial when you know that you should be out on the floor? This is true when the edition is many minutes late and the paper doesn't "behave," making each minute worth an hour of leisure time.

Now, how can a representative expect an executive to be in a listening mood at such times? Although I am not gifted with the first principles of salesmanship it seems to me that one of the prime rules for successful salesmen should be "Get your customer and keep him in a good humor."

—*IMPRESSION PETE.*

Matrix Cuttings by Intertype

THIS paragraph set in eight point Intertype Regal No. 2A duplexed with **Cairo Bold No. 2** 12345 **12345**

8 Point Regal No. 2A with Cairo Bold No. 2

ABCDEFG abcdefghijklm 12345
ABCDEFG abcdefghijklm 12345

14 Point Futura Bold Condensed with Medium Condensed No. 2

ABCD abcdefgh 12345
ABCD abcdefgh 12345

14 Point Cairo Medium with Bold

ABCD abcdefgh 12345
ABCD abcdefgh 12345

14 Point Cairo Medium with Heavy

ABCD abcdefghijk 123
ABCD abcdefghijk 123

18 Point Kenntonian with Italic

Newspaper Halftone Etching Depths

I have always been highly interested in better engraving for newspapers. For that reason, Mr. Schotanus's article which appeared in a recent issue of the *Photo-engravers' Bulletin* seemed to me to be an important document. I was also interested in Mr. Winkler's article in the May issue of *Printing Equipment Engineer*, in which he discussed Mr. Schotanus's proposed standardization of increased etching depths for plate reproduction.

Here at the Minneapolis *Star-Journal* plant we have been etching cuts to greater depths than suggested by Mr. Schotanus. Our tests on cuts and stereotypes have brought to light some interesting figures. These figures are taken from tests on many hundreds of halftones and stereotypes and show the following:

Powder-etched Halftones

Average Depths (65 screen cuts)		Stereo Depths from these cuts	
Highlights	0.006 in.	Highlights	0.005 in.
Middletones	0.004 in.+	Middletones	0.003 in.—or+
Shadows	0.002 in.	Shadows	0.0015 in.—or+

The depths indicated in the stereotypes in the middletones and shadows of powder-etched plates are too shallow to retain clarity on a high-speed newspaper press, printing on newsprint with newspaper ink.

The Modern Way

Now compare the depths in the powder-etched plate shown in the table above with a 65 screen cut etched the modern way:

Average Depths (65 screen cuts)		Stereo Depths from these cuts	
Highlights	0.006 in.	Highlights	0.005 in.
Middletones	0.005 in. +	Middletones	0.004 in.+
Shadows	0.0035 in.+	Shadows	0.0025 in.+

The necessity for giving a pressman a plate from which he can print a quality result is too obvious to need comment. The above tables of figures show that the engraver must improve his methods, more especially in etching, to accomplish this result.

Cordially yours,
D. D. Curriden, Supt. Eng. Dept.
Minneapolis (Minn.) *Star-Journal*

Saw-Trimmer Catalog

Milwaukee Saw-Trimmer Corporation has published a catalog showing its complete line of saw-trimmers, routers, accessories and supplies. Fully illustrated and indexed with price list.

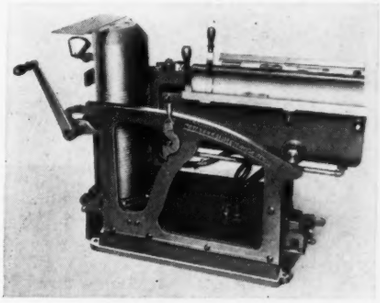
Vibro-Insulators

B. F. Goodrich Co. has published a bulletin showing applications of its Vibro-Insulators for elimination of vibration from electric motors, air compressors, ventilating fans and blowers and other equipment.

Hoe Curved Molds

The vacuum feature arranged in the concave portion of the Hoe Curved Casting Mold in which are cast 7/16 in. stereotype plates with ribs, holds the mat in its correct position and curvature along a length of approximately 25 in. Advantages listed by manufacturer are: Finished plates show better and smoother type faces and an absence of the sinks and irregularities which are caused by the mat buckling; vacuum has the further effect of eliminating mat creepage which is of great importance where color work is involved.

The truer curvature and better printing face of stereotypes produced on this type of casting mold are, to a large degree, the result of the vacuum which has a tendency to pull entrapped air through the mat. It also is inclined to draw the antimony in the molten metal to the face of the mat before solidification.

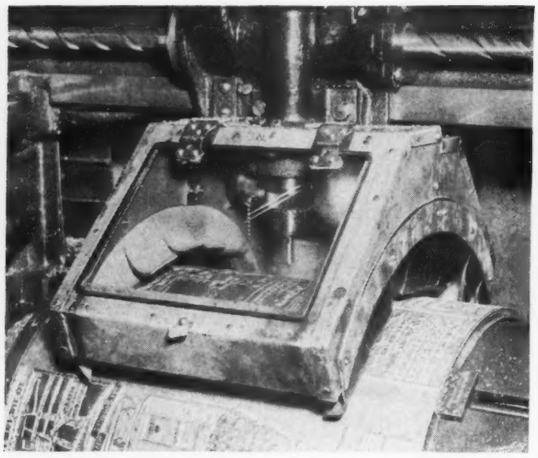


View of Hoe's new vacuum duo-cooled Stereotype Curved Plate Casting Box. Casts plates 7/16 in. thick with ribs.

Both the upper and lower portions of the new Hoe Curved Casting Mold can be arranged for water cooling. To eliminate the guesswork which has accompanied both single-cooled and double-cooled molds, the manufacturer recommends the use of a Hoe Water Mixer. A thermostat built into the cover of the mold controls automatically an electric valve which proportions the correct amounts of hot and cold water carried to the cover in the arc of the single-cooled mold and to both cover and lower portion of the duo-cooled type.

The thermostat has a range of approximately 85 deg. to 245 deg. F. The ideal temperature for the best casting results varies, of course, according to local conditions of metal temperature, cooling water temperature, the quality of plates to be cast in a given time, but experience indicates that a thermostat setting of about 130 deg. F. produces the best all-round results.

When equipped with water mixers, new Hoe Curved Casting Molds are provided with a thermometer from which the operator can at all times determine the exact temperature. Once the temperature which produces the best results has been determined the operator can maintain it for future operations.



This type of chip guard was devised by and attached to the Des Moines (Ia.) Register and Tribune stereotype plate routers by Machinist Jim Cocks as the solution for a problem existing in the stereotype department. A second plate router was about to be installed in the department. There wasn't enough floor space to permit erection of the usual wire cage housing, so both old and new routers were provided with the chip guard as shown here.

Router Chip Guard, eliminating wire cage, permits installing second router in newspaper's stereo department — Floor space problem eliminated

By GEORGE GRANT*

*The *Register* and *Tribune*, Des Moines, Iowa.

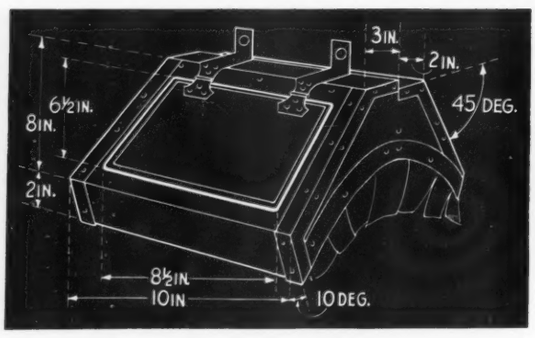
THOSE stereotype executives who have been up against the problem encountered by Stereotype Superintendent Andy Jose of the Des Moines (Ia.) *Register* and *Tribune*, will appreciate the router chip guard devised by Machinist Jim Cocks of the *Register* and *Tribune*.

Mr. Jose's problem was concerned with additional router cage space necessary to accommodate a new router which was to be installed in his stereotype department. Because of the restricted floor space, finding room for another wire cage housing to confine the flying chips from the new router was out of the question.

Getting into a two-man huddle, both Superintendent Jose and Machinist Cocks agreed with the latter's observation that perhaps the floor space which would be required by the time-honored cage for the new router could just as well be eliminated from both the old and new Goss routers. Both agreed too that screened router compartments were sometimes objectionable because of the shutting off of light and ventilation. Evidently results of the huddle were satisfactory, because Machinist Cocks depared for the *R.&T.* machine room.

The first model of the flying chip guard devised by Machinist Cocks as attached to one of the routers met with unqualified approval. The illustrations really tell the story. While all of the measurements of the guard are not given in the diagram, yet enough dimensions are indicated so that where a similar problem exists in another plant, no difficulty will be experienced in making the device. Evidently, in the *R.&T.* stereotype department, no serious problem existed in actually changing routing technique from the open-head method to a router equipped with the guard.

The guard was constructed from galvanized iron sheeting. The overall width is 10 in. The glass door is set at an angle of 45 deg. Besides providing visibility of the routing work, it is hinged at the top to permit raising it when changing router bits or cleaning the routing light. The safety glass door measures 6½ in. by 8½ in. At either side it will be noticed that the guard has been cut away in a sector of a circle to conform to the plate curvature but has been made practically chip-proof by lining the space between guard and plate with a slitted felt drop. It seems that Machinist Cocks made a raid in the pressroom for an old press blanket from which to cut the felt drops. The felts are held in place by the semi-circular galvanized iron strip, both of which are affixed by screws.



While all of the measurements for the stereotype plate router chip guard are not given here, the dimensions shown in this diagram will give a workable idea as to how Machinist Jim Cocks went about designing the guard.

Modernization Program Completed

The Long Island City, N. Y. offices of the Ideal Roller & Manufacturing Company at 21-24 39th Avenue, were recently doubled in size. Modernized glass brick windows and fluorescent lighting are features of the new addition. The new office completes the modernization and expansion program which began last year when the factory was enlarged to accommodate additional machinery for the manufacture of new and improved types of rollers.

EXECUTIVE ¶s

Mark J. Garlick, manager of the Chicago office of The Challenge Machinery Co. since 1925, died in Chicago on September 15 after an illness of several weeks. Burial was at Grand Haven, Mich. Mr. Garlick is survived by the widow, Viola M., and one son, Mark, Jr.

Of interest to newspaper mechanical executives is the news that Mechanical Superintendent Enoch A. Koynen of the Ambridge (Pa.) *Daily Citizen* and Miss Irma E. Erkkila were married at the bride's home in Pittsburgh on Saturday, September 14. Mrs. Koynen was assistant head nurse at Pittsburgh's West Penn hospital. Ambridge will be the home of Mr. and Mrs. Koynen.

S. Kenneth Trunnell, formerly of the Des Moines (Ia.) *Register-Tribune*, has been appointed composing room superintendent of the Omaha *World-Herald*.

Phil C. Voelker, besides doing linecomposing machine maintenance work in Ohio and Michigan, is representing Rich & McLean.

Correction — Last month we reported that Joseph Thuringer had become Superintendent of the Printing Plant, Eastman Kodak Company, Rochester, N. Y. Correctly, Mr. Thuringer is now typographer in the creative department of Case-Hoyt Corporation in Rochester.

Richard P. Bligh, who formerly was a member of the Linotype agency staff in Chicago, is now representing the Linotype Company in Iowa. He is now making his home, with Mrs. Bligh and their daughter, at 1815 Twenty-seventh Street, Des Moines. His telephone number is 7-5530.

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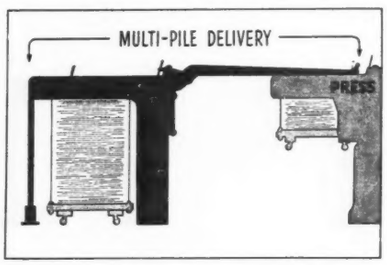
EQUIPMENT *and Supplies*

Miller Multi-Pile Delivery

The Miller Multi-Pile Delivery may be obtained for most Miller Automatic Cylinder Printing Presses and in suitable adaptations for all Cutters and Creasers. Manufacturer states cardboard, cover, book and commercial papers are delivered equally well. As is shown in the illustration, two delivery piles are utilized as indicated at *A* and *B*. Sheets may be delivered into one of the piles by the press while the other full pile is being removed and replaced by a fresh board. Or, the freshly printed sheets may be directed to either pile at will by the operator by means of a carriage adjustment.

The second delivery is synchronized automatically with the first delivery. Overhead tapes, jogger action, gas burner, independent self-starting motor and press trip handle are similar to that of the first delivery. A counterbalanced



Diagrammatical representation showing arrangement of Miller Multi-Pile Delivery which is available for most Miller Automatic Cylinder Printing Presses and for Miller Cutter and Creasers.

rame carries the sheets to the second pile from the standard press pile. The second delivery stops or starts automatically when the frame is raised or lowered. Sheets are visible printed side up. Piles are removable with press in full operation.

The counterbalanced carriage frame may be raised completely and only the first delivery used for short runs. By means of a manual control a required number of sheets may be delivered alternately to each pile, or one pile may remain in the delivery while the other is filling.

Core For Smaller Presses

Wm. C. Hart Co., Inc., has announced a ball bearing roller core for cylinder and high-speed job presses. Construction of the new core varies from that used for larger presses. Instead of the shoulder-hexagon nut assembly, the new smaller core end is fitted with a cap which contains the ball bearing at either end of the core. Composition cast on the roller shell as shown in the accompanying illustration, while the roller is free to revolve on the ball bearings on the central shaft.

Among the claims made for the ball bearing roller core (1) Saving in roller composition, (2) Friction greatly reduced, (3) Heating of core ends eliminated, (4) Power saving.

Drawing shows construction of Hart's new ball bearing roller core for cylinder and high-speed job presses

Morley Trutone Mat

Morley Button Mfg. Co. announces this month the Morley Trutone Mat for newspaper stereotyping. Claims made for the mat are (1) Added durability, (2) Easy molding, and (3) Better printing. Company states test samples are obtainable upon request by specifying gauge and shrinkage desired. Address Morley Button Mfg. Co., Portsmouth, N. H.

Reid-Hill Newspaper Page Storage Rack

Twenty full 8 col. newspaper pages in stereotype chases may be stored in the Read-Hill Newspaper Page Storage Rack announced by William Reid & Co. Each of the 20 storage shelves measures 30 in. wide by 30 in. deep. Distance from the floor to top storage shelf is 60½ in. Distance from bottom shelf to floor is 18 in.

In the Reid-Hill Rack, the platform to which the pages are transferred from the floor truck or vice versa travels up or down by motor power from the truck

from which the page has been transferred to the shelf in which the page is to be stored. The platform measures 33 in. wide and is 26 in. deep. The platform may be folded down from horizontal to a vertical position when not in use as shown in the illustration.

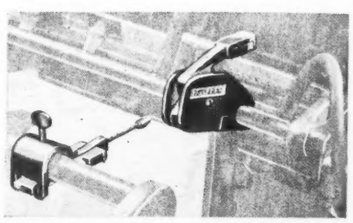
The receiving platform is driven by one of two motors according whether it is to be raised or lowered. One motor, running in a clockwise direction, is fitted with two straight round belts to drive on clutch wheel. The other motor, running counterclockwise, also is fitted with two round belts running to another drive wheel. The operating clutch is mounted between the two drive wheels. Manipulation of a clutch lever causes the platform to travel up or down. An automatic safety stop is provided for the up and down limits of platform travel. The long steel screw visible in the illustration at either side of the frame, together with a bronze nut drive the platform either up or down.

The shafts are mounted on ball bearings and ball thrust bearings. The platform is mounted on ball bearings.

Operation of the rack is noiseless. Weight is 1600 lbs. Two Westinghouse ¼ h.p. motors, 110 v. or 220 v. supply the power.

Alternate Feeding Attachment

Specialty Printing Equipment Company's Multiroll Alternate Feeding Attachment for Miehle Vertical Presses is



View of Multiroll Attachment on feeder of Miehle Vertical Press. Multiroll permits double inking of the form — alternate printing impression.

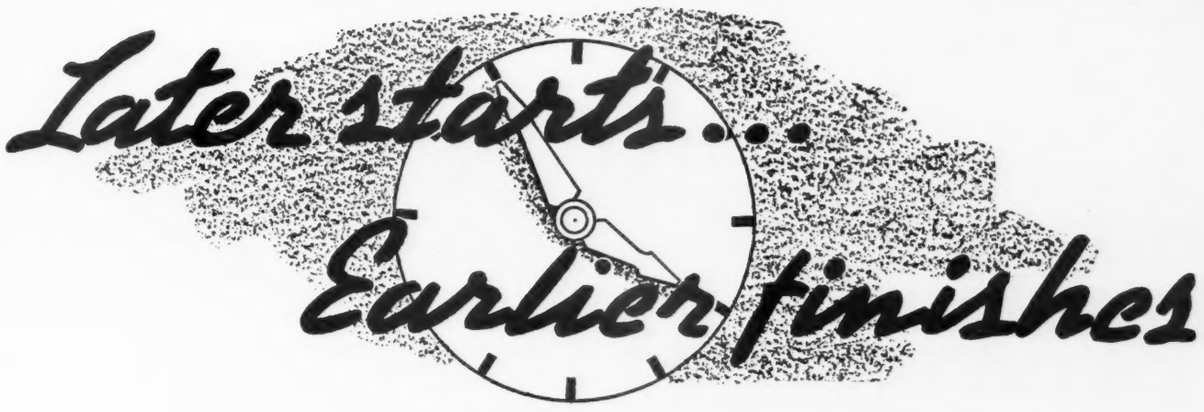
announced as being fully automatic in action. The Multiroll permits even inking of large, heavy forms by doubling the ink distribution.

The Multiroll attachment alternately opens and closes the vacuum line to the sucker feet to allow the feeder to pick up a sheet every other revolution of the press instead of every revolution. This alternate feeding permits double rolling of the form for each impression and permits the ink to be used more sparingly. Manufacturer states that the passing of the rollers over the form twice eliminates shadow and roller marks.

When using the Multiroll the press can be increased in speed to equal or nearly equal the production that would be obtained if a sheet were to be printed each press revolution.

Installation time is said to be 2 min.

Further information may be obtained from Specialty Printing Equipment Co. direct, or through *Printing Equipment Engineer*.



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By eliminating the slowing down of presses for paper roll changes, the Autopaster either reduces your running time or increases your output in a given length of time. In addition, it reduces your newsprint waste and improves the quality of your presswork. The better presswork results from uniformity of speed, which promotes uniformity of inking, impression, and folding. All of these facts are well established by the service records of Autopasters now in use.

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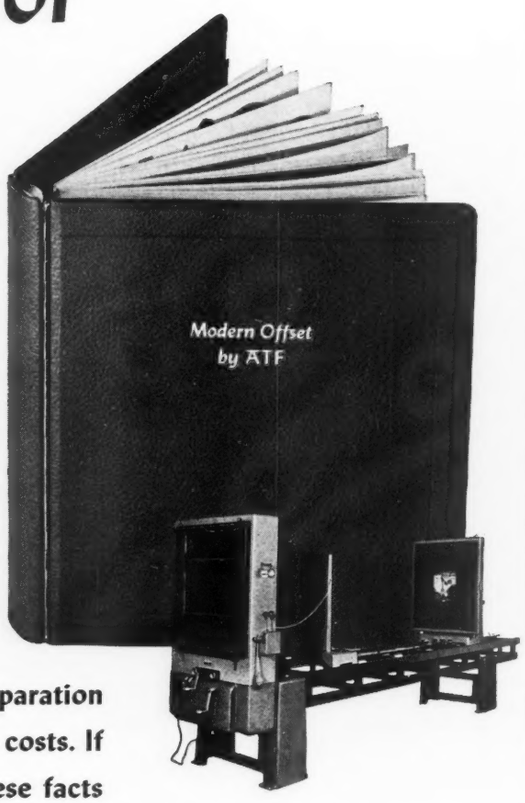

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...it reveals in simplest detail, step by step, the way an offset job is handled in preparation for printing... and comparative costs. If you are in offset, you need these facts to help you cut your costs and boost your profits by simplifying your production. If you are not in offset, it will show you why certain jobs can be done economically *only* by offset... perhaps point the way to why you aren't getting your fair share of the available business. "Modern Offset" by ATF isn't for sale... but the information it contains is available to every printer for the asking. Make a date now... call, write or wire... your nearest ATF Branch or Dealer... and arrange to see it. Or, watch for early announcement of preview of ATF's complete Modern Offset Plant... at your nearest Branch Office, or Dealer. There'll be a copy of "Modern Offset by ATF" there for your inspection.

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is made for fastening all kinds of cuts to metal or wood base. It provides a simple means for mounting cuts on bases in position exactly as indicated in the advertiser's layout.

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SOUTHERN CONFERENCE

(*Continued from Page 22*)

and make their way to the center of the cylinder. The cut of the blanket as well as its size will have certain effects. Mr. Hackman stated that canvas tails should always be applied squarely for best results.

No new remedy for flying and misting ink at speeds of 30,000 i.p.h. was reported at the Birmingham Conference.

Press - Stereotype Superintendent Robert V. Mullen of the Montgomery (Ala.) *Journal*, said he had been studying the question as to whether first impression printing should be done on the finished or unfinished side of the paper. He said he prints first impression on the finished side because page 1 is the show window of the paper and should look as well as possible. Clifford Wilkinson of the Huntsville (Ala.) *Times*, prints the wire side first. He referred to the paper roll arm rollers which cannot be turned around. He stated manufacturers will wind paper in any manner desired. Peter Prassinos's pressroom equipment is such that he cannot run the wire side first at all times, but he did advocate the finished side for first impression printing where possible. He concluded by saying that ink will not penetrate as well on the finished side of the paper.

R. B. Hackman discussed ghosting and stated it really is offset or slur which can be remedied by roller setting. Hard rollers are prone to cause the trouble with solid cuts or large headletter; soft rollers do not ghost.

Chairman Knighton requested Ralph Buvinger of the Wood Newspaper Machinery Corporation to talk on whether it is true that when a tight or loose fitting plate is locked on the plate cylinder, the printing circumference of the plate is changed from a perfect to an imperfect semi-circle.

Cylinder Plate Fit

Mr. Buvinger explained that if a plate fits the cylinder tightly it tends to remain a smaller semi-circle or radius, irrespective of how tightly it is locked. If a plate fits the cylinder loosely, the tendency is to remain a larger semi-circle or radius, regardless of the tightness of the lockup. The force of center clips, if any, or the end clips, causes the plate to be pulled close to the cylinder, but between the clips, along the semi-circle, the plate tends to remain either tight or loose. Assuming that the plate cylinders and the back of the casting box are true circles of correct diameter, that the shaver arch is not worn or warped, and that the shaver knife is adjusted correctly, then it is possible that the cause of tight or loose plates is to be found in improper plate cooling. Tight plates, usually, are caused by too much cooling water on the inside of the plate after shaving. Loose plates, usually, are caused by too much cooling water on the outside of the plate after shaving. Careful adjustment of the water jets should solve the problem. In some localities, natural chemicals are contained in the city water. These chemicals cause rust or scale to form in the cooling section of the casting box, the shaving arch and the connecting pipes and valves. Cooling system become clogged gradually to lessen the flow of water.

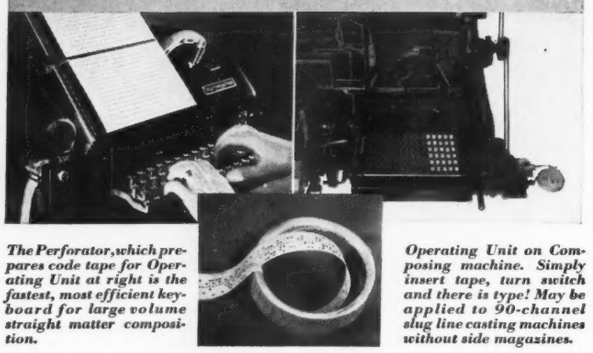
Mr. Buvinger told the conference that stereotype equipment makers will advise what chemical or mechanical equipment should be used to clean the cooling system. Consideration should be given to the installation of a circulating water system, by means of which rain or soft water can be used continuously, to prevent recurrence of the trouble.

F. C. Hudson, Technical Adviser, of Pressmen's Home, Tenn., at the request of Production Manager R. J. Richardson of the Memphis (Tenn.) *Commercial-Appeal*, described the Velo process of printing with cold-set inks as used on *PM*, the New York tabloid daily paper.

Addresses Typothetae

J. T. Mackey, president of Mergenthaler Linotype Company, spoke at the annual convention of the United Typothetae of America at the Mayflower Hotel, Washington, D. C., October 7 to 9. Mr. Mackey discussed the significance of plant modernization under present conditions.

34 modern Newspapers now use TELETYPESETTER



The Perforator, which prepares code tape for Operating Unit at right is the fastest, most efficient keyboard for large volume straight matter composition.

Operating Unit on Composing machine. Simply insert tape, turn switch and there is type! May be applied to 90-channel slug line casting machines without side magazines.

Long since passed the experimental stage, Teletypesetter is used today in 34 newspaper plants, magazine and book publishing houses in America—many abroad.

Increases composing machine output by as much as 50 to 100%.

Has fast, touch-system keyboard. Operators prepare tape at 350 to 400 lines per hour.

Gives *continuous*—not intermittent—production.

Is a proven money saver in composing room, operating with either men or women, in open and union shops and for local copy as well as wire use.

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Since 1932, Teletypesetter has paid big dividends to users in increased output, lowered costs and smoother operation.

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Jefferson City Post-Tribune, Jefferson City Capital News, Jefferson City, Mo.
Lloyd Hollister, Inc., Wilmette, Ill.
Norman Transcript, Norman, Okla.
Ogdensburg Journal, Ogdensburg, N. Y.
The Colonial Press, Inc., Clinton, Mass.
The Cuneo Press, Inc., Philadelphia, Pa.
The Dothan Eagle, Dothan, Ala.
The Evening Leader, Corning, N. Y.
The Evening Tribune, Hornell, N. Y.
The Guthrie Register-News, Guthrie, Oklahoma
The Huntsville Times, Huntsville, Ala.
The Newburgh-Beacon News, Newburgh, New York
The Raleigh Times, Raleigh, N. C.
The Selma Times-Journal, Selma, Ala.
The Wilmington Star-News, Wilmington, North Carolina
The Wooster Daily Record, Wooster, O.
The York Dispatch, York, Pa.
Time, Incorporated, New York, N. Y.
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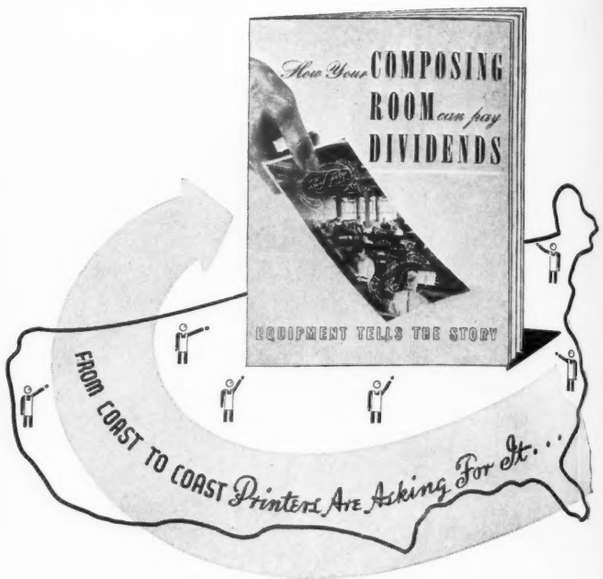

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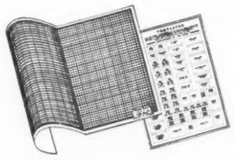

Each booklet contains a floor plan diagram and templates of composing room equipment to simplify your layout problems.

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PRINTING PATENTS REPORT

Covering Patents Issued August 27, September 3, September 10 and September 17.

This data is compiled exclusively for *Printing Equipment Engineer* by Invention, Inc., is verified in the United States Patent Office, and is comprehensive of all patents in the field of each heading continuous from the last published issue of this magazine.

For copies of patents listed here, specify the patent numbers and send 10c each (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating:

2,213,068. IMPROVED MEANS OF CONTROL OF POWER BACK GAUGE MOVEMENT of paper cutters. Invention permits forward and backward movement of back gauge to be checked by reversing the current flow in the driving motor of the gauge. Invented by Walter C. Eickman, Dayton, Ohio. Assigned to Harris-Seybold-Potter Company, 4510 E. 71st St., Cleveland, Ohio. Application March 7, 1939. 8 claims.

2,213,674. PAPER DRILLING MACHINE with a novel structure for automatically changing the position of the side gauge or guide so that the pack of paper sheets being operated on may be moved to a new position. This arrangement also automatically resets the side gauge to original position after all of the desired holes have been drilled in a given pack of sheets. Invented by James W. Lee and Freeman Barney, Grand Haven, Michigan. Assigned to The Challenge Machinery Company, Grand Haven, Michigan. Application November 8, 1939. 21 claims.

2,215,009. SIDE GUIDE FOR PAPER DRILLING MACHINES designed to facilitate locating of a pack of paper sheets underneath the drill at two or more different positions. Invented by James E. Lee, Grand Haven, and Freeman Barney, Spring Lake, Mich. Assigned to The Challenge Machinery Company, Grand Haven, Mich. Application November 8, 1939. 7 claims.

2,215,433. COVER FOR BOOKS OR FINDERS, particularly of the type molded from sheets of thin, flexible material such as a paper base impregnated with latex while the pulp is still wet. Book covers made according to the invention are characterized by an improved round corner structure and a new arrangement of embossed strengthening ribs along the edges of the cover. Invented by Clarence D. Trussell, Poughkeepsie, N. Y. Assigned to Trussell Manufacturing Company, Poughkeepsie, N.Y. Application April 6, 1939. 2 claims.

Composing Room Equipment:

Re. 21,543. LINECASTING AND COMPOSING MACHINE, and automatic operating and controlling mechanism therefor. Device is of the type including a mechanism responsive to a control type or to corresponding electrical impulses, and a selector device controlled by this signal responsive mechanism to select one of a plurality of matrix or function bars, actuating mechanism being provided which takes its power from the main linecasting machine. Invented by Louis M. Potts, Evanston, Ill. Assigned to Teletypesetter Corporation, 1400 W. Wrightwood Ave., Chicago, Ill. 76 claims.

2,212,987. METAL POURING SPOUT for transferring molten metal from a furnace to one of a plurality of individual molds for casting pigs. The invention is characterized by provision of a simple manually operated gate in the pouring spout for controlling flow of metal through the spout. Invented by Albert H. Jung, Flushing, N. Y. Assigned to American Metals Corporation, Brooklyn, N. Y. Application April 29, 1939. 5 claims.

2,214,395. LINE GUIDE COPYHOLDER MEASURE for Linotype or Intertype machines. Designed to be engaged over the copyholder finger and provided with double edges for different measurement, one edge reading from right to left and one from left to right, the device can be moved along the copyholder finger to facilitate quick determination of different measurement. Invented by Covel Woody, Ogden, Utah. Assignment of 25% to C. W. Guernsey, Ogden, Utah.

2,214,873. AUTOMATIC BRAKE FOR TYPOGRAPHICAL MACHINE MAIN SHAFTS, designed to overcome difficulties caused by the tendency of the main shaft to continue rotating after the clutch has been disengaged. The new brake is such that it is carried into and out of engagement with the drive shaft as the bell crank lever is rocked to disengage the clutch. Invented by Craven A. Baumgardner, Huntington, W. Va. Assigned to Mergenthaler Linotype Co., 29 Ryerson, Brooklyn, N. Y. Application August 19, 1938. 9 claims.

2,214,887. SLUG CASTING MACHINE incorporating a novel arrangement whereby the printing edge of the slugs beyond the type characters thereon may be cast a predetermined level below the printing face of the type characters, so that printing plates may be mounted directly on the slugs, avoiding the necessity of milling off the blank portions of the slugs. Invented by Richard R. Mead, Queens Village, N. Y. Assigned to Mergenthaler Linotype Co., 29 Ryerson, Brooklyn, N. Y. Application May 23, 1936. 11 claims.

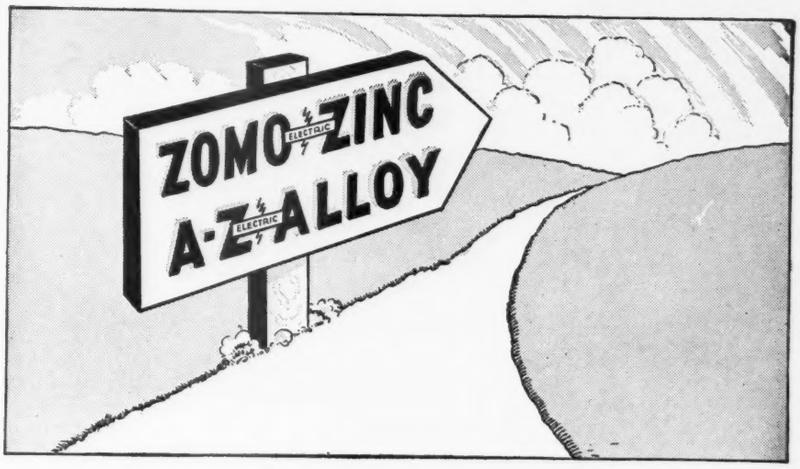
2,214,888. SLUG CASTING MACHINE incorporating a novel arrangement whereby the printing edge of the slugs beyond the type characters thereon may be cast a predetermined level below the printing face of the type characters, so that printing plates may be mounted directly on the slugs, avoiding the necessity of milling off the blank portions of the slugs. Invented by Richard R. Mead, Queens Village, N. Y. Assigned to Mergenthaler Linotype Co., 29 Ryerson, Brooklyn, N. Y. Application May 17, 1937. 4 claims.

2,214,892. TYPOGRAPHICAL COMPOSING MACHINE, characterized by an arrangement whereby a trip lever operated by depression of a key causes a keyrod striker, which is normally held by the trip lever in an inoperative position, to move into the path of a continuously reciprocating member so that the reciprocating member actuates the keyrod striker and effects operation of the matrix escapement mechanism, the trip lever thereafter automatically returning the keyrod striker to its inoperative position. Invented by Richard H. Scott, Enfield, William F. Gorse and Arthur S. Hayward, Altrincham, England. Assigned to Linotype and Machinery, Ltd., London, England. Application February 23, 1939. 22 claims.

2,215,033. TYPOGRAPHICAL COMPOSING MACHINE MATRIX FEED CONTROL. Key controlled solenoid operates the escapement for controlling the matrix feed. Adapted for use upon intertype or Mergenthaler composing machines. Invented by Bernard J. Fisher, New Orleans, La. Unassigned. Application December 14, 1939. 7 claims.

2,215,043. AUTOMATIC INGOT FEEDER FOR LOWERING METAL into melting pot. Feeding is more or less continuous according to the demand and obviates the necessity of rewinding the chain before feeding additional ingots. Has a float control which keeps molten metal at a constant level. Invented by AlbertH. Jung, Flushing, N. Y. Assigned to United American Metals Corporation, 202 Diamond St., Brooklyn, N. Y. Application April 4, 1940. 6 claims.

(*Continued Next Page*)



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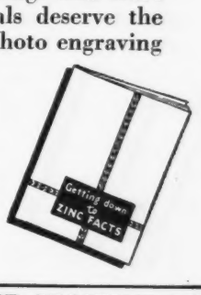

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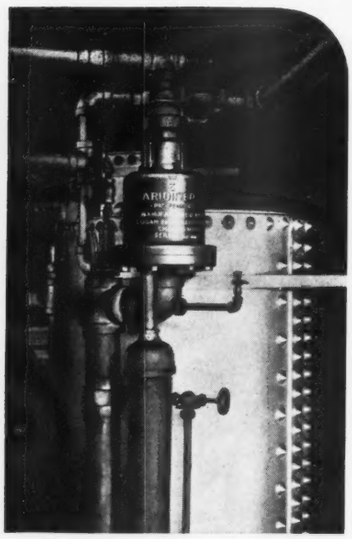

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The ARIDIFIER
Dries and Cleans Compressed Air

Feeding, Folding, Delivery:

2,212,812. WEB ROLL SUPPLY MECHANISM FOR PRINTING MACHINES including means for joining the webs of a rotating replacement roll and an expiring web roll, when both of the webs have printed impressions thereon, and a novel mechanism controlled by actuation of the web joining mechanism to vary the relative speeds of the rolls to compensate for variations in register of the corresponding printed impressions on the two rolls. Invented by Albert J. Horton, White Plains, N. Y. Assigned to R. Hoe & Co., East River and 138th St., New York, N. Y. Application December 31, 1935. 22 claims.

2,212,937. SEPARABLE BINDER TAB for maintaining the free end of the web on a replacement roll against the body of the replacement roll while the roll is being rotated to make a "web join" between the running web of an expiring roll and the web of the replacement roll. The tab is made up of two juxtaposed tab members, one secured by adhesive to the web end and one to the body of the roll, the two tab members being weakly secured together by adhesive to facilitate ready separation. Invented by Albert J. Horton, White Plains, N. Y. Assigned to R. Hoe & Co., East River and 138th St., New York, N. Y. Application (original) February 8, 1935. Divided and this application January 27, 1938. 14 claims.

2,213,736. PRELOADING APPARATUS FOR PRINTING PRESSES with novel features whereby loading may be effected in a readily accessible position of the sheet feeding table rather than when the table is in normal position relative to the press. The patent claims broadly, the arrangement of the feed table such that the table may be moved laterally relative to the press to a position where the sheets may be readily placed on the table. Invented by Joseph F. Jirousek, Cleveland, Ohio. Assigned to The Chandler & Price Co., Cleveland, Ohio. Application Sept. 21, 1938. 7 claims.

2,214,088. SHEET FEEDER of the type employing a continuous air blast to fluff up the sheets to be fed, lifting the top sheet toward the suction gripper. The invention is characterized by means for providing an air blast of increased intensity immediately before gripping of a sheet by the suction devices, to eliminate disadvantages heretofore caused by decrease of the air supply when the suction grippers become effective. Invented by Frederick W. Seybold, Westfield, N. J. Assigned to American Type Founders, Inc., Elizabeth, N. J. Application Sept. 27, 1939. 22 claims.

2,214,719. RENEWAL WEB END RESTRAINING MEANS for use while the renewal roll is being brought up to speed. The invention is characterized by provision between the web end and the roll body of a "slip sheet" which is glued to the web end but contacts the roll body through a non-solidifying grease-like adhesive, this grease-like adhesive either representing the entire restraining connection between the roll body and the web end, or being supplemented by conventional adhesive tabs. Invented by Stanley C. Freeman, Mount Vernon, N. Y. Assigned to R. Hoe & Co., Inc., East River & 138th St., New York, N. Y. Application December 24, 1936. 13 claims.

2,214,896. SHEET FEEDER capable of continuously feeding sheets from the top of a pile while allowing replenishing of the pile from the bottom without hampering feeder operation. Invented by Leonard Baker, Hillsdale, N. J. Assigned to Dexter Folder Co., New York, N. Y. Application August 24, 1937. 24 claims.

2,215,069. ROLL SPINDLE for roll of paper or fabric designed to engage roll core with an accurately centered, uniform grip. Consists of a expandable sleeve which is slipped inside the roll core and expanded by air pressure introduced into an inflatable tube contained in the unit. Invented by Charles A. Meisel, Milton, Mass. Assigned to Meisel Press Mfg. Co., Boston, Mass. Application Feb. 14, 1939. 4 claims.

(*Continued Next Page*)

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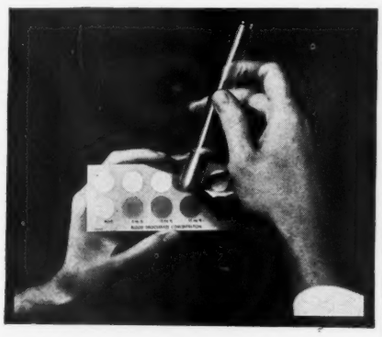
Blood Samples Matched for Lilly Color Chart

How's your blood pressure? What with the war, the election, and other disturbing factors, it's difficult to keep a good blood pressure down.

When blood pressures get too high, doctors often administer potassium thiocyanate to ease this condition. It is necessary, however, to make sure that not too much of this thiocyanate gets into the blood stream. By precipitating a blood sample, the thiocyanate concentrate can be seen as a liquid ranging in hue from light yellow to orange, depending on the quantity present.

The Eli Lilly Company in Indianapolis recently produced a little printed chart which would show this range of colors and enable doctors to match blood samples with its colors to determine the amount of thiocyanate concentration. The job of matching the inks with which to print these colors was an exceptionally delicate one. Any variations of hue would make the charts useless. But the matches turned out to be entirely accurate, and the thiocyanate concentration charts can be



used for careful diagnoses by physicians. Yes, IPI supplied the matches and the inks.

Inks for Furniture!

You may be sitting on some IPI Everyday ink. Don't get up. We'll explain. One of our representatives wrote to tell us that he is selling Everyday inks to a large furniture manufacturer in Grand Rapids. They say that these Everyday inks are the best thing they've found to impart permanent color effects in wood graining work. And you'll say they're the best inks you've ever used for automatic presswork.

FLOWER BOOKLET IN FOURTH PRINTING; OVER MILLION MARK

NEW MATERIALS FOR INKMAKING IMPROVE SCIENCE OF PRINTING

This picture shows a few of the hundreds and thousands of raw materials that must be investigated in never-ending succession by The Research Laboratories of Interchemical Corporation, parent company for International Printing Ink.

Until about 20 years ago, the ingredients which went into printing ink were not dissimilar to those in use in Gutenberg's day. Linseed oil, lamp black (carbon) and other materials that had been known to printers for centuries were still the "staples" used in ink manufacturing.

But modern research has changed the picture. New synthetic vehicles are replacing linseed oil. These vehicles and natural oils, new gums and resins from all corners of the earth have made possible inks that dry faster and print with greater clarity of impression.

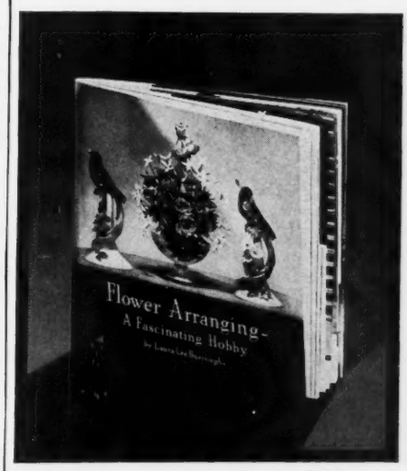
Yes, inkmaking has changed! And research is responsible — research like IPI's which investigates unremittingly new ways and new products that can improve the art of printing.

Brochure for Coca-Cola Has 60 Four-Color Reproductions

A brochure which is requested by more than a million people must have unusual merit, and the "Flower Arranging" booklet produced by Davis, Delaney & Harrs for Coca-Cola is unusual in many ways. It includes 56 pages of process color plates showing various ways to arrange table decorations (not excepting Coca-Cola bottles).

The flower groups were photographed in full colors, and Carbro prints were made of each picture. It was found that the heat from the camera lights was strong enough to wilt the flowers. So in some cases buds were used, and then brought into full bloom with photo lights as the camera clicked.

No subjects could create more exacting color problems. Mother Nature has none of the limitations of a four-color process. Reproducing the flower settings through the camera, the photoengraver's lens, and the printing press was a real job, but the finished product proved to be a credit to all those concerned with



it. The fourth printing of "Flower Arranging" is now being completed, and requests for the brochure are still being received in impressively large numbers.

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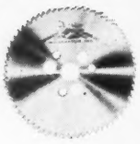

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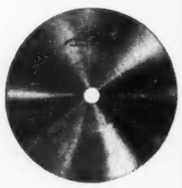

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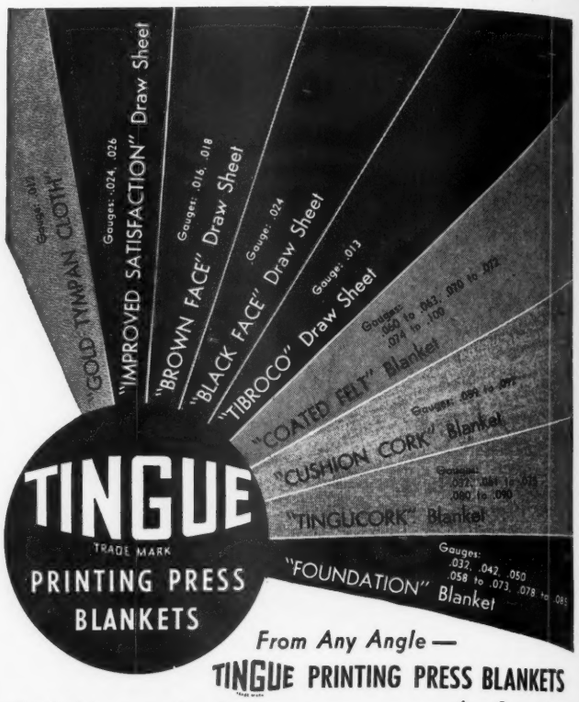

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Miscellaneous:

2,213,006. NITRO-CELLULOSE BASE INK for printing on textile materials. The invention is said to eliminate such objectionable features as inflammability, stringiness, necessity for high pigmentation, etc., by novel combination of a high boiling solvent and a non-solvent diluent with the nitro-cellulose base. Invented by Melvin W. Johnson, Nutley, N. J. Assigned to Pittsburgh Plate Glass Co., 2222 Grant Bldg., Pittsburgh, Pa. Application May 22, 1937. 4 claims.

2,213,109. AUTOMATIC MACHINE FOR ROLLING AND WRAPPING CALENDARS and the like. Invention comprises automatic gripping jaws to grasp opposite ends of a binding, spring urged rollers to apply rolling and sealing pressure to the calendar and the wrapping paper which encloses it, and a system of guiding and feeding the paper into the machine. Invented by Louis A. Spievak, Los Angeles, Calif. Assigned to Alexander Dittler, De Kalb County, Ga. Application November 18, 1937. Abandoned, and new application December 23, 1938. 17 claims.

2,213,126. TEXTILE PRINTING with compositions wherein pigments are conveyed by mixtures of ethyl cellulose and nitrocellulose. The invention eliminates "hand", "crocking", etc. Composition may comprise ethyl cellulose and nitrocellulose mixed with gelled castor oil, dibutyl phthalate, butyl acetate and chrome yellow. Invented by Wilbur L. Jones, New York, N. Y. Assigned to Interchemical Corp., 75 Varick St., New York, N. Y. Application April 7, 1938. 5 claims.

2,213,712. METHOD AND APPARATUS FOR SURFACING INKING ROLLS with molten printers' composition by rotating the roller with its axis inclined and gradually coating from the upper end of the roll to the bottom. Two rolls may be coated simultaneously, one utilizing the excess molten composition draining from the other. Invented by Frank H. Marshall, Chicago, Ill. Assigned to Ideal Roller & Mfg. Co., 2512 W. 24th St., Chicago, Ill. Application August 9, 1937. 13 claims.

2,213,980. PRINTING PRESS ROLLER COATING MACHINE designed to apply to press rollers coatings of uniform thickness, eliminating possibility of the formation of air bubbles. Includes means for rotatably supporting a roller at an angle, a device for applying molten composition to the roller progressively from the top to the bottom of the roll, and a knife or doctor for scraping excess composition from the roll. Invented by Fred Ossing, Cleveland, Ohio. Unassigned. Application July 24, 1937. 2 claims.

2,214,365. PHOTOGRAPHIC DYE-PRINTING METHOD for the ornamentation of fabrics and other fibrous sheet material. The method comprises impregnating the fabric with an ester of a leuco compound of a vat dye in a solution containing formic acid, exposing desired portions of the fabric to light through a negative to render certain areas of the dye water-insoluble, and washing out the dye which has not been exposed to light. Invented by Oscar R. Flynn, East Orange, and Francis S. Richardson, Rutherford, N. J. Assigned to Waldrich Co., Delawanna, N. J. Application June 18, 1938. 2 claims.

2,214,500. INSPECTION APPARATUS for viewing recurring symbols on a continuous web while the web is in motion. Utilizing a mirror arranged to oscillate through an arc for viewing the length of continuously moving web displayed, the device is adjustable to any point on the travelling web. Invented by Hans Fischer, Goggingen, near Augsburg, Germany. Assigned to Maschinenfabrik Augusburg-Nuremberg A.-G., Augsburg, Germany. Application January 25, 1938. 5 claims.

2,214,593. PAPER REGISTERING MECHANISM for use in combined slitting and severing operations. Designed to keep two webs of printed wrapping material in register, the invention utilizes black index points printed on the margin of the web to interrupt a photo-electric cell, and so actuate a severing knife. Invented by Gilbert B. Mustin, Lansdowne, and Louis Pittaluga, Germantown, Pa. Assigned to Frank H. Fleer Corporation, 10th and Diamond, Philadelphia, Pa. Application August 8, 1939. 8 claims.

2,214,687. METHOD FOR MULTICOLOR PRINTING, characterized by transfer of any number of colors from the "plate" to the surface with one impression. Apparent purpose of the invention is to facilitate hand reproduction of a small number of multi-colored sheets, such as posters. Method comprises preparation of a tracing sheet of the design to be printed; application of this sheet to a flat body of clay or similar material; cutting of this body into segments corresponding to color areas of the design to be reproduced; removing the segments and filling each with a printing material of a desired color; applying a support to the face of the color plate thus formed, and applying a solvent treated surface to the back of the plate to obtain the multi-color print. Invented by Franz Weiss, Park Ridge, Ill. Unassigned. Application November 15, 1939. 5 claims.

Plate Making:

2,213,110. MACHINE FOR FINISHING THE INNER SURFACE OF CAST STEREOTYPE PLATES, comprising broadly a shaving knife arranged to travel in a circular path, a rotary cutter following the knife and provided for accuracy of finish, and means for controlling and applying power to the knife and cutter. Invented by Cortland J. Strang, Mount Vernon, N. Y. Assigned to Wood Newspaper Machy. Corp., 688 So. 2nd St., Plainfield, N. J. Application January 15, 1938. 3 claims.

2,213,443. MARKING, SQUEEGEEING AND DEVELOPING MACHINE for photogravure or rotogravure printing, characterized by an improved mechanism for applying the register marks and securing the sensitized carbon tissues in accurate position upon the printing cylinders, and for developing and etching the cylinder. Invented by Wm. F. Huck, Richmond Hill, N. Y. Assigned to R. Hoe & Co., Inc., East River and 138th St., New York, N. Y. Application October 5, 1937. 16 claims.

2,213,568. METHOD FOR BENDING STEEL PRINTING PLATES INTO ARCUATE FORM, characterized by support of the fine print lines of the plate by a soft rubber backing during bending. Invented by Curt J. Rohland, Seekonk, Mass. Assigned to Paul-Rohland, Inc., a corporation of Rhode Island. Application April 2, 1937. 8 claims.

2,214,950. PLANOGRAPHIC PRINTING PLATE for offset printing, and method for producing it. Made of stainless steel, chromium, or chromium alloys, the plate is characterized in that printing may be temporarily discontinued without the necessity of coating the picture to prevent ink-receiving and ink-refusing areas of the plate becoming altered by action of air. Invented by Claes B. Aller, Copenhagen, Denmark. Unassigned. Application June 8, 1937. 4 claims.

2,215,073. MACHINE FOR SHEARING, perforating, cutting, and performing like operations on envelopes and other sheet material. Device consists generally of a system of rollers carrying specially arranged shearing and like elements for operating on sheets passing between the rollers. Invented by Arthur L. Roloff, Chicago, Ill. Assigned to Garden City Envelope Co., 500 S. Peoria, Chicago, Ill. Application February 13, 1939. 2 claims.

2,215,128. PREPARATION OF PLANOGRAPHIC AND INTAGLIO PLATES with silver halide emulsions for monochrome and polychrome printing. Invention proposes use of a basic metallic sheet, the surface of which is plated with a metallic layer suitably composed to function as an etching-control layer and supporting a lacquer or varnish layer which in turn supports a colloid layer containing a sensitive silver salt. Invented by Charles E. Meulendyke, Rochester, N. Y. Unassigned. Application June 7, 1939. 6 claims.

Printing Presses and Supplies:

2,212,820. ROTARY INTAGLIO PRINTING PRESS with novel means whereby a direct pressure reading for each end of the impression roll at each side of the press can be obtained while the press is operating, so that the impression roll may be adjusted for a predetermined uniform pressure throughout its length while the press is running. Invented by Howard M. Barber, Pawcatuck, Conn. Assigned to C. B. Cottrell & Sons Co., Westerly, R. I. Application June 17, 1938. 5 claims.

(*Continued Next Page*)

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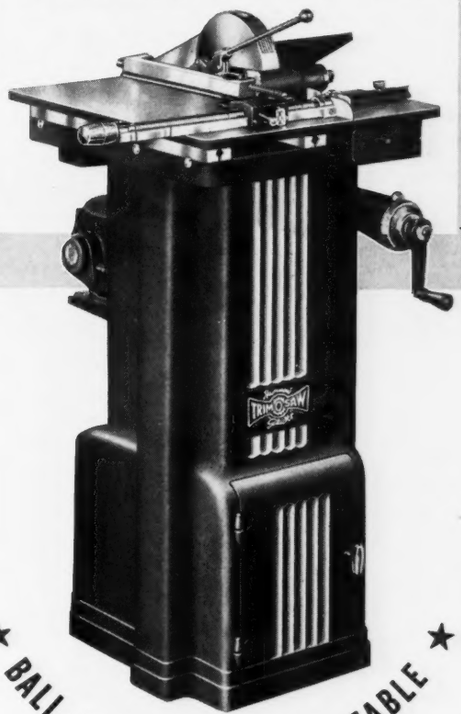

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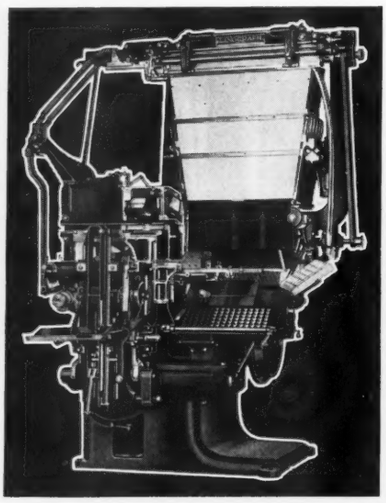

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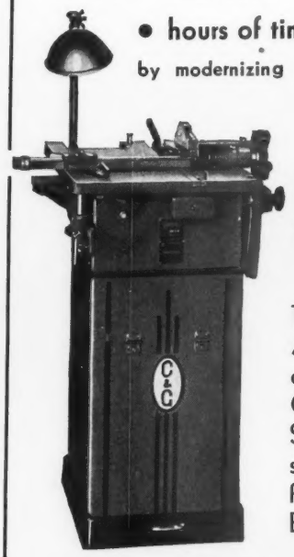

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2,213,130. PRINTING PRESS with novel means for holding the rolls of printing couples in cooperating relation and means for throwing them out of such relation. The impression cylinder has a shaft movable toward and away from the printing cylinder, pressure applied to the ends of the shaft being adjustably divided between the shaft ends. Invented by Leroy Q. Presby, Melrose, Mass. Assigned to American Stay Co., East Boston, Mass. Application May 21, 1938. 18 claims.

2,213,419. PRINTING PRESS INKING MECHANISM characterized by use of an ink transferring mechanism including a smooth, resilient roller, and a distribution roller having pyramidal surface projections, the two rollers contacting each other so that ink is transferred from the resilient roller to the tips of the pyramids on the distributor roller, the amount of ink transferred being varied by varying the pressure with which the rollers contact each other. Invented by Auburn Taylor, Charleston, W. Va. Assigned to Goss Printing Press Co., 1535 So. Paulina St., Chicago, Ill. Application April 23, 1938. 5 claims.

2,213,569. ROTARY PRINTING MACHINE designed to print in any desired number of different colors in a single pass through the machine. In the apparatus, webs are moved from one point of operation to another by means of a cushioning belt, and means is provided to sever the work as it is discharged from the machine. Invented by Curt J. Rohland, Seekonk, Mass. Assigned to Paul-Rohland, Inc., a corporation of Rhode Island. Application May 10, 1937. 15 claims.

2,214,355. PRINTING PRESS DRIVE designed to maintain constant web tension. The invention is specifically concerned with a novel electric braking mechanism responsive to the web stress and to the difference between the web speed and the speed of the paper unwound from the roll. Invented by Karl G. Tiselius, Vasteras, Sweden, and Nils J. E. Haglof, Wanstead, London, England. Assigned to Allmanna Svenska Elektriska A.-B., Vasteras, Sweden. Application May 27, 1939. 3 claims.

Re. 21,568. TEXTILE PRINTING MACHINE including new mechanism for feeding the printed web onto the engraved rolls so accurately that the length of the engraved rolls may be restricted to the width of the printed web, and that no backgrey is needed. Invented by Murray N. Bulford, Clearwater, S. C. Assigned to United Merchants & Mfgs., Inc., New York, N. Y. Application for reissue August 24, 1939. Originally No. 2,158,027. 18 claims.

2,214,983. PLATE CLAMP and method for securing. According to the invention, intermediate clips are provided to engage edges of adjacent plates, these clips being movable to provide desired margin space between plates. In this manner, the greatest possible area of the printing cylinder is liberated for printing matter. Invented by Adolph Zuckerman, New York, N. Y. Assigned to R. Hoe & Co., Inc., E. River and 138th St., New York, N. Y. Application February 21, 1938. 9 claims.

2,215,389. APPARATUS FOR SPRAYING PRINTED SHEETS with offset-preventing agent, characterized by a novel arrangement whereby individual, successive amounts of compressed air are produced for the spraying action in successive time periods corresponding with the succession in which the freshly printed sheets leave the printing press. Invented by Artur Buttner, Heidelberg, Germany. Assigned to Schnellpressenfabrik A.-G. Heidelberg, Heidelberg, Germany. Application June 9, 1937. 9 claims.

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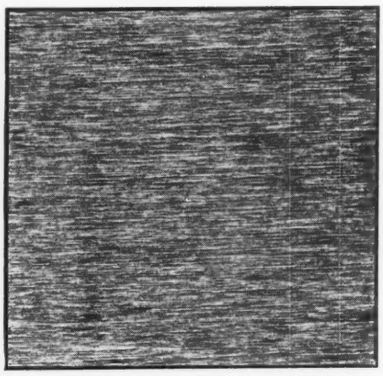

Photograph (magnification 4 X) of surface produced by old polishing processes. Scratches run in one direction only.

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DENVER, OMAHA, HOUSTON, MINNEAPOLIS, KANSAS CITY, MEMPHIS, TULSA, OKLAHOMA CITY, SAN ANTONIO, WICHITA, DES MOINES, DALLAS — Thompson-Hayward Chemical Co.

ATA Election

At the annual convention of the Advertising Typographers Assn. of America, Inc., which closed September 18 at White Sulphur Springs, W. Va., the following officers were elected: E. G. Johnson (J. M. Bundscho, Inc., Chicago, Ill.), president; H. H. Blinkmann (Bohme & Blinkmann, Inc., Cleveland, O.), first vice-president; A. J. Meyer (John C. Meyer & Son, Philadelphia, Pa.), second vice-president; William Carnall (Los Angeles, Cal.), third vice-president; P. J. Frost (Frost Brothers, Inc., New York, N. Y.), treasurer; Albert Abrahams (New York Employing Printers Association, Inc.), executive secretary. Also, the following Board of Directors: All the officers and Kurt H. Volk (Kurt H. Volk, Inc.), E. M. Diamant (Diamant Typographic Service), and C. E. Ruckstuhl (Typographic Service Company), of New York.

ATF Changes

Several personnel changes have been announced by Frederick B. Heitkamp, vice president of American Type Founders Sales Corporation.

Fred A. Hacker, supervisor of the ATF Rubber Plate Division, has assumed additional duties as supervisor of Offset Equipment and Accessories Sales. Associated with him will be W. Howell Lee of the ATF-Webendorfer organization. Herbert P. Paschel, formerly of the Gevaert Company, New York, and writer on the technique of color photography and reproduction, has accepted an appointment as offset camera specialist with ATF.

On the Pacific Coast, appointment of Dave O'Brien and Arthur D. Gilbertson as manager and office manager, respectively, of the ATF Portland (Ore.) office has been announced. Mr. O'Brien for the past 15 years has been president and Pacific Coast manager of the Monotype Corporation of California. Mr. Gilbertson was transferred from the Cleveland ATF office.

Head Booklet

Mergenthaler Linotype Co. has issued a 20 page booklet which is designed to illustrate by examples how 25 different newspaper heads may be composed from six matrix fonts. Point sizes range from 14 to 36. Examples are single and double column. Booklet shows that a dozen fonts including a few larger type sizes for three and four column heads, for spread heads and banner lines would complete the head schedule for any paper. Booklet may be obtained from any Linotype agency.

Scheduled for Addresses

Harry L. Gage, Linotype vice-president, is scheduled for many addresses in various parts of the country this fall.

September 28 he spoke at a banquet of graphic arts organizations in Pittsburgh commemorating the five hundredth anniversary of printing. October 11 he talked on *The Significance of Printing in Advertising*, at the Advertising Club of Columbus, Ohio. Next day he delivered the commencement address at the Government Printing Office School, Washington, D. C.

At the Mile High Club of Denver, October 16, he talked on *The Five Hundredth Anniversary of Printing*, and at the University of California Press, Berkeley, October 23, will speak on *Significance of Machines in the Development of Printing*. At the Los Angeles Public Library, October 29, he will speak on *Of the Making of Books*.

$17,000 Yearly Savings

Currently circulated since technical description of a photo-electric register control for Philadelphia *Inquirer's* two four-color color rotogravure presses in a recent issue of *Printing Equipment Engineer* is statement that based on results of first three months of operation the savings will repay the investment in seven months. Investment was $10,000 — at this rate annual return will be $17,000. Installation of the photo-electric register control on the two four-color presses also permits parallel operation aside from the savings in waste caused by misregistered copies.

When you are called "ON THE CARPET"

"Front offices" have a peculiar way of calling their mechanical executives "on the carpet" relative to production losses and perhaps excessive metal costs. All too frequently it's the old story of a front office executive buying type metal on a bid basis, then expecting the executive in charge of the stereotype department or composing room to get quality production at low cost.

At those "carpet sessions" the man who knows the least is generally the "goat." Imperial recommends that if you haven't already done so, you get a copy of our complimentary book—Everyday Problems of Type Metal Users and Their Solutions. Carpet sessions need hold no fear for you if you are armed with the facts in this book and insist that the front office buy dependable Imperial metal, serviced by the Plus Plan. Today's the day to switch to Imperial.

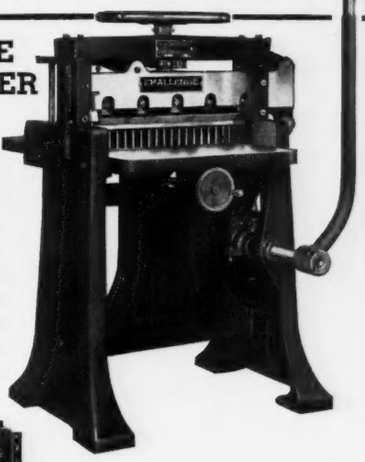
IMPERIAL TYPE METAL CO.

Philadelphia • New York • Los Angeles • Chicago

Imperial

Economize with.... CHALLENGE EQUIPMENT

CHALLENGE LEVER PAPER CUTTERS



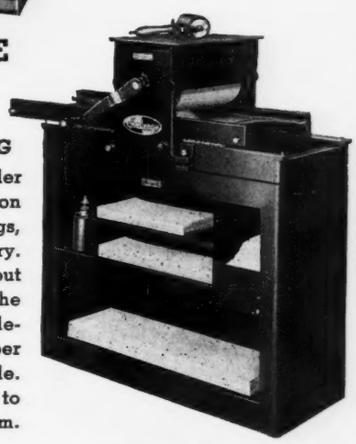
Made in two sizes, 26½ and 30½-inch, these powerful lever cutters reduce physical effort and insure economy. The table is supported by a solid center piece —no sag—last sheet cuts every time.

CHALLENGE POWER INK DISTRIBUTOR

Every print shop needs one! Saves time . . . makes it easy to ink hand rollers. You simply set a roller on the revolving metal cylinders, and in a jiffy it's uniformly inked. Unit is motor powered. Made in 10 and 20-inch sizes. Stand optional.

CHALLENGE PROOF PRESSES

SERIES C and CG



Built like a cylinder press—bed rolls on anti-friction bearings, cylinder is stationary. Two styles: C, without grippers; CG, with the Challenge register device with bed gripper and adjustable guide. Sizes from 12x18 to full newspaper form.

CHALLENGE HI-SPEED QUOINS

Two do the work of 5 to 8 ordinary quoins. Operated by one turn of key, self-locking, cannot slip. Made of cadmium plated steel, each one a self-contained unit. Six handy sizes. ● Write for further data on above items.

The Challenge Machinery Co.

GRAND HAVEN, MICHIGAN 339

CHICAGO, 17 E. Hubbard St. 200 Hudson St., NEW YORK

Clean Sheets

... every day!

Just as the housewife wants clean sheets on every bed, for comfort and health... the printer wants clean sheets on every job for dollars and cents. Crisp, clean sheets every day in the pressroom are no longer a miracle to thousands of printers with ATF Guns. Many printers say they have paid for their ATF Guns in savings on a single job! Eliminate costly slip-sheeting, racking, running the presses slow. Speed up production on every job. The new ATF Diafram Gun is all-air operated and selling at lowest prices in ATF history!

Ask your ATF Salesman for full details... or write

AMERICAN TYPE FOUNDERS

200 Elmora Avenue, Elizabeth, N. J. • *Branches in Twenty-three Principal Cities*

TYPES USED: STYMIE BLACK AND ITALIC, GRAYDA AND SPARTAN

Intertype Notes

John S. Plummer, manager of Intertype Corporation's Chicago office, announces a rearrangement of territories now covered by representatives C. J. Stupka and F. H. Stefflre. In the future Mr. Stupka will devote his sales efforts to the city of Chicago. He formerly covered the State of Iowa. Mr. Stefflre will continue to operate in the States of Nebraska and Wyoming, and in addition he has been assigned the State of Iowa.

Intertype Corporation announces the appointment of Rodney W. Ford as representative for the entire state of Utah and part of Idaho. Mr. Ford will reside in Salt Lake City, Utah, and Intertype's San Francisco Branch will be his headquarters.

Printer Paints Portraits

John M. Quinlan, proprietor of the Mutual Printing Company, 183 High St., Boston, Mass., as a hobby follows the art of painting portraits and landscapes when he is not actively engaged in his company's affairs. It is said he has acquired quite a reputation as an artist in and about Boston.

Recently, he secured an assignment to paint the portrait of the proprietor of *Gazetta del Massachusetts*, an Italian newspaper. He has just completed what he considers his masterpiece, a portrait of President Charles Alpert of the Craftsmen Machinery Co.

Mr. Quinlan has been a printer for nearly 40 years. He has been superintendent of several plants in Boston and he has been a master working printer for the past 15 years.

ILLINOIS CONFERENCE

(*Continued from Page 16*)

mittees, and the election of officers. These include Earl Anderson of Rockford Newspapers, Inc., president; Howard Colton, Bloomington *Pantagraph*, vice president; Ed Nagel, Champaign *News Gazette*, secretary-treasurer. The directors for the coming year are Russell B. Miller, Bloomington *Pantagraph*; E. L. Bailey, Alton *Telegraph*, and Harry Pottle of Western Newspaper Union, Inc.

Rockford has been chosen for 1941.

MEETING REPORTS

Press and Stereotype Meeting

Otto Kurrle of the Moline *Dispatch*, discussed changing page length to take care of lengthwise shrinkage of the mat. The column length is 20 in. He cut down the foot sticks so now the columns make up 20 5/16 in. He also uses a 12 point head rule and in setting ads one-half point per inch is added. The mat shrinks 3/16 in. to length of page.

The holding of shell casts in place on base showed several methods. Lee Moore, Champaign *News-Gazette*, installed the Cut-Lock system. This system employs small base block units with holes in which to insert pins to hold cuts in position. Some are using cement and some are using tape.

Discussion on laminated rubber creeper next to the mat, a red fibre board and cork on top molding combination, showed that sufficient depth with laminated creeper could not be obtained in some instances, but that the laminated creeper proved satisfactory for molding mats for tubular presses. It gives a shallow but hard-sharp mold.

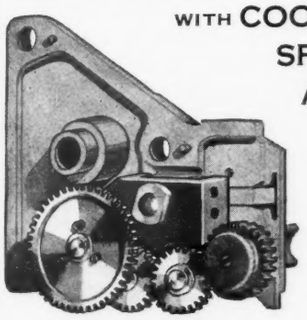
"Curly" Wakefield, Chicago *Daily News*, molds mats without creeper, using a hard cork and a molding board. Pages are made up with high quads so as to get away from extreme depths in all open spaces. This molds mats so deeply they nearly cut through. All solids are built up to from 0.003 in. to 0.005 in. above type high. A 0.028 in. mat is used.

Ed Thorpe, Decatur *Herald and Review*, uses Imperial molder together with hard cork and a fibre board. He gets a very deep, sharp mat, using a 0.024 in. mat.

The question, *Who has solved a way to take the bow out of double pages rolled from a single chase?* was responded to by Mechanical Executive DuSell of the Aurora *Beacon-News*, who said he used gummed paper on the corners of the mat to hold it in position in the casting box. Elgin *Courier-News's* Pearce rolls from center of double page, both ways, to help stretch the mat. This puts stretch on tail end of mat instead of ring end. Harley Mintun, Peoria *Star* and Howard Colton of the Bloomington *Pantagraph*, entered into

MODERNIZE OLDER LINOTYPES AND INTERTYPES

WITH COOK SLOW SPEED ASSEMBLER



•

PRICE $12.50
SLOW SPEED OR INTERMEDIATE SPEED
(Interchangeable)

WHAT DOES IT DO?

On the old style Assembler, the star wheel travels faster than the matrix as it comes from the belt, giving the latter further impetus and allowing it to strike the rails or preceding matrix with such force as to cause it to "bounce," "jiggle" or "lay back."

This momentary "laying back" results in frequent transpositions, brought about in this manner: The impact of the matrix advances the assembler slide more than enough to accommodate this one matrix. The bottom of the matrix slides forward so that the fast spinning star wheel cannot effectively push it immediately to an upright position. The matrix or spaceband strikes the matrix on its left side and enters the line in a transposed position. This condition, annoying to the operator, discourages fast, efficient composition, or induces costly errors.

The Slow-Speed Assembler corrects this condition by reducing the speed of the star wheel by half (two to one ratio), or three quarters (1½ to 1 ratio). Change-over made in a few minutes.

On initial orders either *Slow Speed* or *Intermediate Speed* Assemblies may be specified. If, later, a change from one ratio to the other is desired, it may be made by simply changing two gears, at small cost.

WHAT IS IT?

It is a complete unit that is fastened to the stud of the old Assembler casting. Installation is easily made in fifteen minutes time, merely by substituting this unit for the old equipment.

It comes with a flexible tube so that all the bearings can be oiled from the *outside*.

This is another "Star" contribution
to increased efficiency at a low cost.

Precision
TRADE ★ MARK
Parts

FOR BEST RESULTS WITH THE ABOVE USE ACE MATRIX DELIVERY BELTS

LINOTYPE PARTS COMPANY

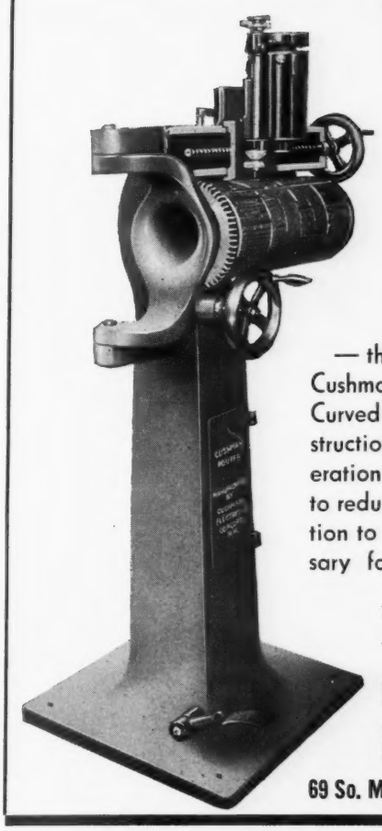
NEW YORK 203 Lafayette Street
KANSAS CITY 314 West 10th Street
CHICAGO 318 West Randolph St.
MINNEAPOLIS 503 Fourth Ave., South
DENVER 1441 Blake St.

G

• • • stands for Gamble
No printers need take
For KIMBLES have proven
The records they'll make.

Motors by KIMBLE
Distributed by AMERICAN TYPE FOUNDERS
Branches and Sales Agents in 25 Cities

ARE YOU USING DUPLEX CURVED PLATES?



— then investigate this Cushman Router for Duplex Curved plates. Sturdy construction, simplicity of operation, accurate. Designed to reduce current consumption to 1/8th of that necessary for ordinary routers.

Write for full information

CUSHMAN ELECTRIC CO.

69 So. Main St., Concord, N. H.

Don't buy a feeder for your Linotype, Intertype, Monotype, Ludlow or Elrod until you see

The Jordan CONTINUOUS METAL FEEDER

1. Operating on a continuous chain, there is no need to pull back the chain when a new pig of metal is to be attached.

2. The pigs are so spaced on the chain that they cannot jam in the metal-pot.

3. The Jordan is a self-actuating feeder. Its movement is controlled only by the amount of metal in the pot so that there can be no sudden dropping of the pig to the bottom of the pot.

This advanced feeder costs no more than outmoded feeders. Complete with support, $75.

Write for illustrated descriptive folder

UNITED AMERICAN METALS CORP'N
200 Diamond St., Brooklyn, N. Y. 2246 W. Hubbard St., Chicago, Ill.
4101 Curtis Ave., Baltimore, Md. 785 Bryant St., San Francisco, Cal.

as fine a type metal as is made
UNITED AMERICAN

CASTING OPERATIONS WERE THE "BOTTLENECK" OF DELAY

IMPOSSIBLE, it seemed, to strike the needed pace in the press-time rush. There was talk of another caster, more room, expensive rearrangements. Then a new hand said that where he had worked, they saved time by never throwing back first casts. They used Certified Mats. And so another Certified user is in the making.

CERTIFIED DRY MAT CORPORATION
9 Rockefeller Plaza, Dept. M, New York, N. Y.

Certified DRY MATS

this discussion but they have not solved the problem. Direct pressure molding would, undoubtedly, limit this trouble.

Ska-Sol was recommended by Harley Mintun for cleaning casting boxes. It will clean a box when diluted 50-50, and can be used several times.

In answer to the question: *Is it true that a press may be operated with less impression when using plates from a vacuum-back casting box?* Howard Colton said "No".

The next question was: *What makes the best form vibrator and feed rollers — rubber or synthetic?* Charles Malm, Peoria *Journal-Transcript*, cannot see any difference. Roy Stewart, of Decatur, thinks rubber best for form rollers, and synthetic for feed and distributors. John Russie, Indianapolis *Star*, thinks rubber is the best, for it will stand regrinding for a number of years. He also recommends covered composition rollers for feed on color presses. He also states he sets his rubber form rollers to cover four lines. Lee Moore, Champaign *News-Gazette*, said his synthetic rollers pick up lint while rubber rollers run clean. Frank Barr, Dayco Roller Co., recommends kerosene or naphtha and oil for wash-up. Lye and soda-ash washes are hard on rollers. Stanisol cleaner is also recommended.

General discussion showed it was not true that underpacking of press will make the first impression sharper but it is common practice to underpack all the impression cylinders, since press blankets have been made firmer.

Ray Silvers asked "Is it necessary to pack mats closer when using a vacuum back box?" General discussion seemed to be that it made very little difference.

Composing Room Session

The program committee invited composing machine manufacturers to discuss their new products. Engineers told about new methods in punching characters for overhang casting. Now fonts are milled to take care of troubles formerly appearing in overhangs. A portable machine also has been developed to mill down outstanding fonts.

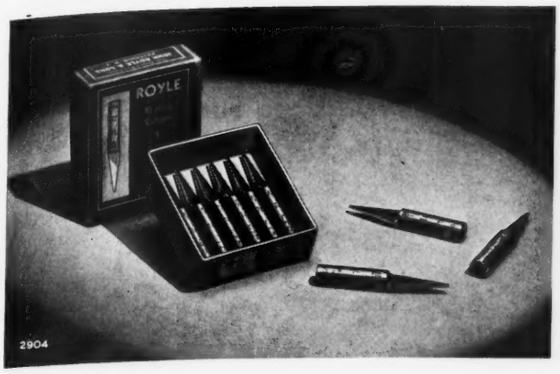
PRINTING INKS
for **ANY** *purpose,*
USUAL OR UNUSUAL
Our line is complete!

WILLIAM C. HERRICK INK CO.
330 West 34 St., New York, N.Y.

KLEAN-O-MAT PROCESS

Quick, Efficient, Safe, Machine Method of Cleaning Matrices in the Magazines.

Write
KLEAN-O-MAT CORP.
60 East 42nd St. New York



ROUTING CUTTER HEADQUARTERS

Choose Style According to Use

Styles	*Blade Sections*	*Recommended for*
A		Electrotypes, stereotypes, wood
B		Zinc
C		Brass
D		Electrotypes and copper
E		Copper (Steel at reduced speed)
F		Zinc (Reinforced blade)
G		Brass (Reinforced blade)
H		Copper (Ground below center)
L		Zinc (Long blade)
M		Wood veining (No taper)

All Royle Routing Cutters reflect advantages gained through more than eighty years' experience in making these tools. We promise no miracles, but offer a complete line of cutters in every respect the finest that sound design, fine material and expert workmanship can produce. . . . .

Write for catalogue 425

ROUTERS · TRIMMERS
BEVELERS · SAWS

JOHN ROYLE & SONS

8 ESSEX STREET PATERSON, N. J.

MORRILL *Presents*

A BOOK OF FINE HALFTONE BLACKS

NEW from cover to cover, and already previewed and endorsed by a number of outstanding printers, this unusual book is a practical aid to anyone using halftone blacks and process colors.»»The entire book is arranged so that one black can be compared with another, by using the same illustration and the same stock, but employing different types of halftone blacks.»»Ask our salesman, or write or telephone our nearest branch office. . . .

MODERNIZE WITH MORRILL

GEO. H. MORRILL CO.

Division · General Printing Ink Corporation
100 SIXTH AVENUE, NEW YORK, N. Y.
Boston · Philadelphia · Chicago · Detroit · St. Louis · Fort Worth · Minneapolis · San Francisco · Los Angeles · Seattle

AMERICAN PUBLISHERS SUPPLY

FLEX-O-FELT GUMMED BACKING FELT — CUT STRIPS OR SHEETS
DOUBLE FACED ADHESIVE TAPE FOR MOUNTING CUTS

CORK MOLDING BLANKETS
MOLDING BOARDS & CREEPERS
DIRECT PRESSURE FELTS

SUPERIOR CASTING BOARDS
STEEL POURING SHEETS
AUTOPLATE BELTS

ROUTER BITS & BELTS
MALLETS & PLANES
CHISELS & JIG SAWS

FORM-O-SCORCH
electric mat dryers

Write for New General Catalog Today!

AMERICAN PUBLISHERS SUPPLY • BOX 131 • WEST LYNN, MASS.

Superintendent W. H. Baldwin of the Peoria *Star*, talked about meetings of departmental groups in his paper. He told how cooperation between departments has reduced expenses in his organization.

Food Advertising

In the discussion about grocery ads, it was stated these ads require more composition time per column than any other advertising classification. This is due to the difficult styles adopted by many food advertisers, calling for several units of type per item. Mixer line-casting machines help solve this problem, but the real difficulty is one over which the composing room has little control. The trouble starts before copy layouts reach the composing room — with the ad writer. His all too meager understanding of composition details plus carelessness, or lack of time in layout and copy preparation, throw extra costs on the composing room. Frequently the composing room has to take matters in its own hands by making changes when the ad writers request one too difficult or some detail can be better set in a little different style. Grocery ads should be accepted subject to the capacity of the composing rooms to execute them. Ad writers should adjust themselves to the facilities and to limitations of the composing room.

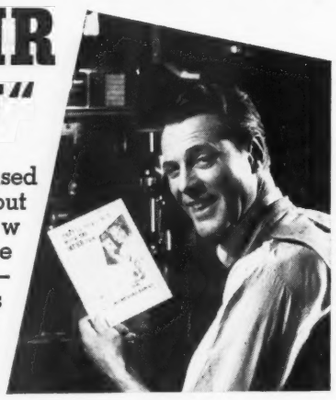
Hand lettering copy on a layout would be splendid if an ad man could letter in a simple style which the operator could follow. Instead, he is usually in a hurry and drops the layout and copy as handed to him by the advertiser, letting the printer do the worrying. If we had but a few such items with which to contend there would be little complaint. A large number constitute a serious problem.

Advertising need not be complicated to show results. Disorderly ads, slanting composition and boxes, items of various lengths to be fitted together do not make for ease of reading comfort.

The ad solicitor has two obligations. First, to the advertiser to get attention for his ad, and second to his newspaper to prepare copy and layouts that will go through the composing room at high speed.

Remember the easy-to-read ads are usually the ads that are the easiest to compose. (*Continued Next Page*)

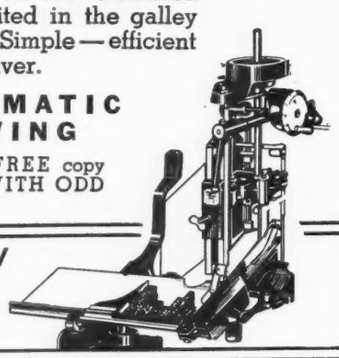
"That'll be a cinch with our MOHR SAW"



"Odd measure jobs used to be a headache — but now our Mohr Saw knocks 'em out like clock-work. Yes sir — it's almost as simple as straight run stuff—and accurate to a gnat's heel." Just a turn of the dial and the slug is automatically sawed to the desired measure and deposited in the galley ready for make-up. Simple — efficient — and a real time saver.

100% AUTOMATIC SLUG SAWING

Write today for your FREE copy of "SHORT CUTS WITH ODD MEASURES."



MOHR LINO-SAW COMPANY
122 N. UNION AVE.
CHICAGO

For Sale

TWO
45x65½ SINGLE COLOR
COTTRELL
SHEET-FED ROTARIES

Good Condition *Attractive Price*

•

Write: **THE VANCE R. HOOD CO.**
225 Varick Street, New York, N. Y.
Telephone: Walker 5-5083

IDEAL PLATE GUMS

Made both from regular rubber and synthetic compounds to meet the requirements of plates for the high-speed printing of cardboard, cloth, wood and rough-textured papers. Special formulas for analine and linseed base inks.

Ideal gums have high tensile strength, mold easily and are abrasive-resistant. Save on ink and make-ready time. For more brilliant colors and for flat tints that are smooth and even, use plates made from Ideal plate gums.

SALES AND SERVICE OFFICES IN PRINCIPAL CITIES

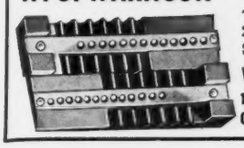
IDEAL ROLLER & MFG. COMPANY CHICAGO, ILLINOIS LONG ISLAND CITY, N. J.

FREE *Rouse* BOOK OF TIME-SAVERS

Complete showing of Rouse tools and equipment with prices. Write for your copy today. There is no obligation.

H. B. ROUSE & COMPANY
2216 North Wayne Avenue, Chicago, Illinois

W. S. WARNOCK POSITIVE LOCK QUOIN



Thousands in use
2 sizes — #1 & #2
Send for Catalog
W. S. Warnock Co.
1524 Jonquil Terrace
CHICAGO, ILLINOIS

Where else can you buy
OFFSET PLATE MAKING EQUIPMENT
including
- PERSONAL INSTRUCTIONS
- INITIAL SUPPLIES
- INSTALLATION AT YOUR SHOP

PHOTO-LITH SALES 5741 W. Division St., CHICAGO, ILLINOIS

STOP OFFSET

Get your free copy of this new bulletin—"10 Ways to Avoid Offset." Valuable—practical—shows how to save money—improve presswork.

E. J. KELLY CO 1807 No. Pitcher Street

FREE

NEW—PRESS GEAR LUBRICANT
Approved by GOSS
- Lasts twice as long
- Clings at highest speeds
- More protection—less maintenance

FREE! LIBERAL SAMPLE Send Name and Address

SOVEREIGN OIL CO., 765 Oakwood Bvd., Chicago

GENERAL REPAIR OF LINOTYPE AND INTERTYPE MOLDS (ANY KIND, ANY SIZE). PARTS, ETC., SINCE 1912
Makers of Reid Magazine Racks, Etc.
WILLIAM REID & CO., 2271 Clybourn Ave., Chicago, Ill.

P-Double-E Indexes Will Help You

FOR SALE—4x4 PMCo Aluminum Bases at 60c each and Regular hooks at 50c each; all in good condition. Box 300, Printing Equipment Engineer, 1276 W. 3d St., Cleveland.

FOR SALE—4300 square inches of Latham Sectional base with 800 hooks, all in good condition. Box 301, Printing Equipment Engineer, 1276 W. 3d St., Cleveland.

FOR SALE—Wesel Final Beds, sections: 4—13x16½; 1—20x29; and 1—21½x29; 300 good hooks. Box 302, Printing Equipment Engineer, 1276 W. 3d St., Cleveland.

A CLEAN Plant is a PROFITABLE Plant

Keep your Plant clean with BREUER'S BALL BEARING
TORNADO
CONVERTIBLE ELECTRIC
BLOWER Cleans EVERYTHING

Blows dust and dirt out of motors and machinery. Quickly convertible into suction cleaner for type cases, storage bins, floors, walls, etc. Sprays paint and insecticide. Hundreds of uses.

BREUER ELECTRIC MFG. CO.
5114 N. Ravenswood Ave. CHICAGO, ILL.

TAKE THE DUST OUT OF IN DUSTRY with BREUER'S BALL BEARING TORNADO PORTABLE ELECTRIC BLOWER

Write for information and FREE TRIAL OFFER

SAFETY • RELIABILITY • ECONOMY

CLINE
PRESS DRIVES and CONTROL
Reels, Tensions and Pasters...

CLINE SYSTEM

CLINE ELEC. MFG. CO.
Chicago: 211 West Wacker Drive
New York: 220 East 42nd Street
San Francisco: 1st Nat'l Bank Bldg

DUPLEX PRESSES

Semi-Cylindrical • Unitubular
Tubular • High Speed Flat Bed
Flat Bed • Stereo Machinery

The Duplex Printing Press Co.
Battle Creek, Mich.

Machinists' Group

The machinists' group talked shop Sunday afternoon. Harry G. Pottle presided as chairman and was successful in getting everyone present to take part in the discussions.

The chairman gave a brief review of Mergenthaler Linotype Company's new book entitled *Linotype Machine Principles*. The manual is profusely illustrated with line-drawings.

The question box provided some very interesting discussions. Bleeding lines, when one spaceband is used in a line, on an Intertype equipped with a Mohr-Saw, was the first question. Suggestions offered were to see that the left-hand vise jaw screw closed before the first elevator seated upon the vice cap; to see that the spacebands are clean and well polished with graphite so a line will be fully justified when using more than one band in a line; also that the left-hand jaw be adjusted with a one-spaceband-line.

The next question was: *What Linotype distributor clutch maintenance is necessary to keep the blocks from separating when the gate is closed?* The gist of the discussion was to keep the leather surface clean, even to removing the brass screws, which hold the leather disk, so that the clutch might slip a little more rather than "grab" too fast, which often causes the blocks to separate. The use of the balancing spring between clutch and pulley was also advised to secure best results.

Another question asked was: *What causes molds to lead up excessively and how long should molds run without cleaning?* This question brought up lively discussion. Suggestions offered as to causes were: Dirty metal, metal out of balance, improper heat control and the use of a metal flux containing salamoniac. It was claimed by one machinist that he had not cleaned a mold for more than 6 months. He uses a daily application of mutton tallow and graphite mixed together, and applied inside the mold cavity.

Another question had to do with setting side knives to trim wide-rib slugs such as are used in advertising figure molds. The complaint was that the slugs measured 0.001 in. strong across the bottom of the slug. It was agreed this was a tough assignment. The knives can be set so a regular U.A. mold will trim perfectly on all four corners, then when trimming a slug cast in a wide-rib mold in the same disk, it appeared as though the knives would "give" a little, leaving the slug 0.001 in. strong across the bottom of the ribs. The suggestion offered was to remove all possible play in the ways of the knife block, so that the right-hand knife might be held as rigidly as possible while the slug is being trimmed.

Engravers' Session

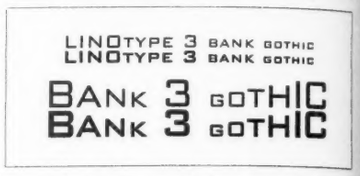
E. J. Andrews presided at the Engravers' meeting. The group agreed to support the annual Illinois Mechanical Conference and appointed a chairman.

Of particular interest to those present was the subject of making more newspaper line work in halftone. Speed of production, elimination of prolonged etching time and routing were advantages gained by engravers. This lowers costs. Stereotypers can also eliminate packing the mats and pressmen favor halftones over line work. Since only two tones are carried in such a plate, *i.e.*, highlight and closed-up shadow or black, many of these halftone reproductions are excellent.

Comparisons were made between costs of cut film and roll film. In both, the matter of utilizing waste or odd sizes is important. While roll film is cheaper, it could cost more money unless properly handled and cut to advantage.

Bank Gothics

Bank Gothics is the name of a new series of Lining Gothics now available on the Linotype. "This series," says C. H. Griffith, Linotype's vice president in charge of typographic development,



"was designed for stationery and related forms of commercial printing.

"New faces available in four sizes of 6 point and five sizes of 12 point — with two weights in each size, light and medium, duplexed on the same matrices."

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free TECHNICAL INFORMATION AND LITERATURE FOR *you*

Circle the numbers on the convenient postage-paid return card, supply your name, title and company address and mail — we do the rest. Manufacturer or supplier will send you information or literature about equipment or supplies advertised in this issue. This card saves you time and postage — Keep informed — No obligation.

Stereotype Dept.

1 NEWSPAPER MATS — Morley Company offers samples of the new TRU-TONE Mat. Specify gauge and shrinkage desired in your request.

2 CATALOG — American Publishers Supply offers a catalog of stereotype department equipment and supplies. Circle this number on the post card.

3 DRY MAT — Burgess will send you test samples of Burgess Chrome Mats. "The front office will see the difference."

4 MASTER FORMER — Sta-Hi says its Master Former helps produce "Better quality printing and lower production costs." Descriptive booklet will be sent at your request.

5 DRY MAT — Wood Flong says "For deep molds and clean plates — try Wood Mats." Circle this number for a sample lot.

6 EASYKASTER — "There is no 'stop and go' with a Hammond EasyKaster '8'". Hammond will gladly send you full description and prices.

7 DRY MAT — Certified says, "Certified Mats help to keep the pace in the press time rush. Send for samples.

8 STEREOTYPE SUPPLIES — Eastern Newspaper Supply offers complete catalog of its line of Stereotype Supplies.

Composing Room

9 SAW SHARPENING SERVICE — Automatic Saw Sharpening Service Co. will give you particulars on how to obtain a new saw free.

10 CUT CEMENT — Let the Booth Rubber Co. send you information about Zink Cut Cement, "A simple means to mount cuts on bases."

11 COMPOSING ROOM EQUIPMENT — Challenge Machinery Co. will show you what it means to "Economize with Challenge Equipment."

12 ROUTER — Cushman Electric Co. says that its router will "Reduce current consumption ⅛ of that of ordinary routers." Get particulars by sending post card.

13 COMPOSING ROOM PLANS — Get your copy of "How Your Composing Room Can Pay Dividends." Circle this number on the post card.

14 MAGAZINE SHIFT — Intertype says that the new Autoshift will "Shift from one magazine position to an adjacent position in less than 2½ seconds."

15 TELETYPESETTER says — "34 modern newspapers now get continuous production." Circle this number for descriptive information.

16 HEAT CONTROL — Linotype says "Micro-Therm gives incredible uniformity in control of metal in the crucible. Send post card for the new booklet, "Heat Control Methods."

17 READABLE MATRICES — Matrix Contrast Corp. says, "Errors in ad composition reduced by 40%". "Total errors at least 25%. Ask for proof." Circle this number on the post card.

18 PRECISION STEP-AND-REPEAT — Molded plates are "actually pre-madeready for exact surface uniformity." Information on this and non-stretch curved plates sent on request.

19 METAL FEEDER — "The Jordan continuous feeder has many exclusive features." United American Metals Corp. will send you data.

20 LINOGRAPH '50' — Linograph Corp. asks you to get acquainted with this "Smooth, trouble free and versatile performer." Complete description offered.

21 NUMBERING MACHINES — For numbering on Rotary Presses, Wetter asks you to let them suggest ways to lower your numbering costs. Get information by circling this number.

22 PROOF PRESSES — Vandercook & Sons will send you particulars on their proof presses and proving machines. Get particulars by sending post card with this number circled.

23 ROUTING CUTTERS — John Royle & Sons, "Routing Cutter Headquarters" offer to send you complete catalog of their cutters in Catalog 425.

PLEASE FILL OUT THIS CARD CAREFULLY

PRINTING EQUIPMENT Engineer — October
1276 West Third Street, Cleveland, Ohio.

Without obligation please have the manufacturers send me literature or information circled below. (These numbers correspond to numbers on descriptive paragraphs).

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36
37 38 39 40 41 42 43 44 45 46 47 48 49

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Use this Free Service—Keep up-to-date on Equipment and Supplies

24 LINO-SAW — "The Mohr-Saw is a part of the Linecasting machine. Most modern, efficient and economical method of odd measure composition." Get booklet by circling this number.

25 SAW-TRIMMER — The Milwaukee Saw Trimmer Corp. offers to send you details on G&C Saw Trimmers. "You can save by modernizing with G&C Precision-built equipment."

26 MONOTYPE — Offers instructive booklet on Monotype Automatic Quadding and Centering. Circle number on the post card for it.

27 TYPE METAL — Imperial Type Metal Co. says if you follow its advice in "Everyday Problems of Type Metal Users and Their Solutions" you'll have information to keep you from "getting called on the carpet."

28 DETAILS AND SPECIMENS — of Ludlow typefaces will be sent you by The Ludlow Typograph Co. Get details also of new Ludlow equipment.

29 SLOW SPEED ASSEMBLER — Linotype Parts Co. asks you to get details on its device to modernize older Linotypes and Intertypes.

Pressroom

30 ATF GUNS — The new Diafram Guns help to "Speed up production on every job." Circle this number for details.

31 KLUGE — offers information on " 'Selectone' Inking System and 'Rigid Impression' ". Send for it.

32 PAPER — Champion Paper and Fibre Co. says, "Thousands find extra value in Champion paper." Send for samples of Champion papers for advertising.

33 OFFSET EQUIPMENT — Get the information ATF offers on offset. "A must for every printer." "See Modern Offset by ATF at your ATF branch."

34 COLD SET INK — Huber offers specimens of Velo Cold Set rotary press printing. Circle this number on the post card.

35 OFFSET PRESS — Harris-Seybold-Potter Company says "Widen your profitable market by printing a job by the method for which it is best adapted." Send for details on solving your lithographic problems.

36 INK — IPI will send you information on new uses and new developments in printing inks. Mail the post card.

37 PRESS BLANKETS — Vulcan says, "Vulcan Press Blankets performance add up to less trouble in the pressroom and less expense to the firm." Get details.

38 MAGAZINE PRESS — C. B. Cottrell & Sons offer details and specifications of its presses and Claybourn Plate Making equipment. Circle this number on the post card.

39 PRINTING INKS — Geo. H. Morrill Co. offers its new book "A Book of Fine Halftone Blacks." "A practical aid in using halftone blacks."

40 PRESS BLANKETS — Tingue Brown & Co. will send you prices and information on press blankets for various types of service.

41 PRESS — ATF says "The new Kelly 17x22 offers time and money saving features." Send the card to get press sheets and full particulars.

42 AUTOPASTER — Wood Newspaper Corp's. Autopasters have enviable service records. Get more information on them.

43 INK — Sinclair & Valentine Co. will send you Literature on "Zephyr Blacks." Ask for it.

44 LUBRICATION — "There is a Pulsolator system for automatically lubricating every size and type of press." Send for Bulletin B-30

Miscellaneous

45 ZINC — Atlantic Zinc Works says "Zomo-Zinc and A-Z Alloy were developed to meet demand for better materials to maintain leadership of photoengraving industry." Send for booklet.

46 ELECTRIC MOTORS—Kimble Electric Co. offers a booklet on motors built for the printing industry.

47 AIR FILTERING — Logan Engineering Co. offers Bulletin 939 telling how your air lines on feeders will be more efficient if they are kept free of dirt and moisture.

48 BEARINGS — SKF will gladly give you information on "why Goss uses SKF bearings in its matrix rollers."

49 PHOTOENGRAVING ZINC — Edes Mfg. Co. asks you to get particulars on Roto Grip Finish Zinc.

Postage Will be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY CARD
FIRST CLASS PERMIT NO. 2285 (SEC. 510 P. L. & R.) CLEVELAND, OHIO

PRINTING EQUIPMENT *Engineer*

1276 West 3rd Street

Cleveland, Ohio

No. 325 Vandercook
Power Proof Press

IS A *Good Proof* WORTH $10?

The value of a good proof goes far beyond the time and cost of producing it. It is the preliminary to a good advertisement or printing job.

A good proof may save hours of delay that would cost many times $10. It may be the medium of customer satisfaction. It is an inexpensive watchman of the valuable time of high cost equipment. It is the basis of definite understanding between the printer and the customer who must be satisfied.

The No. 325 Vandercook Power Proof Press makes 1000 good proofs an hour. It prints as well as production presses, taking a full size newspaper page in stereotype chase, or a form 24" x 24½". The No. 325 Vandercook Power Proof Press is the solution to the problem of customer demand for proofs in quantity.

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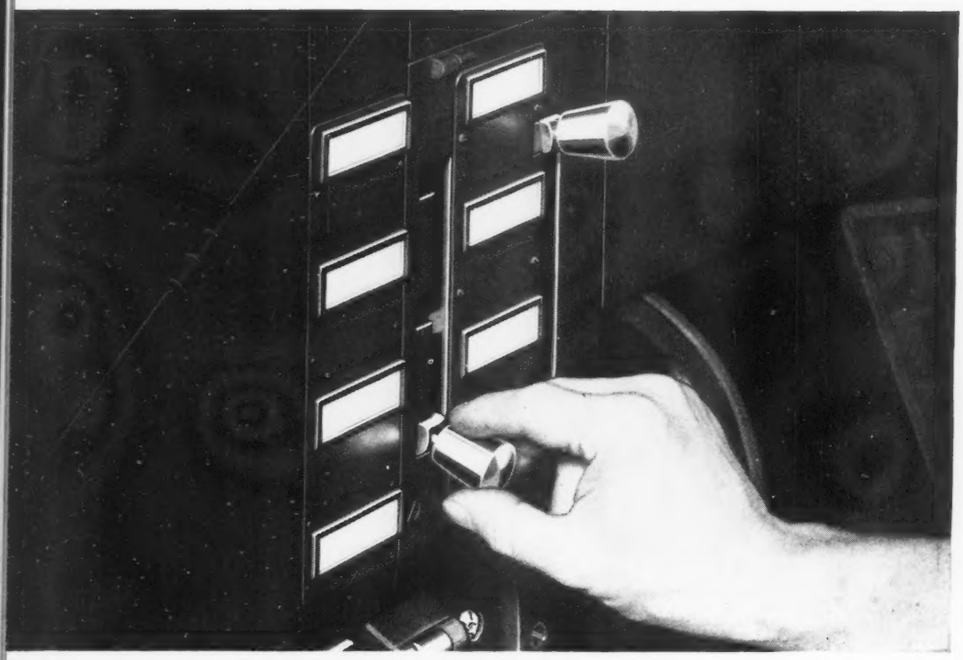
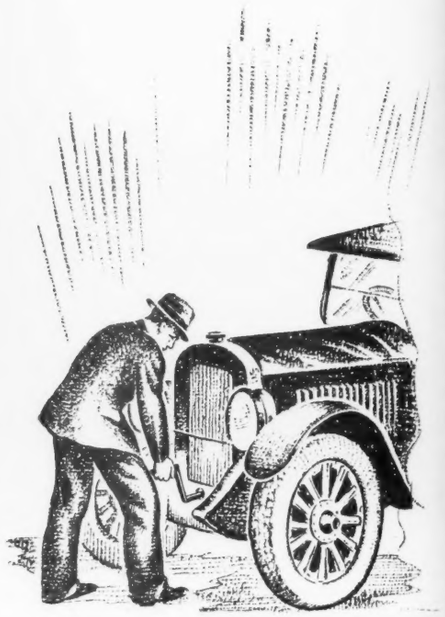
Eastern Branch
220 East 45th Street, New York City

CANADA: SEARS LIMITED, TORONTO, MONTREAL, WINNIPEG, VANCOUVER

HAND CRANKING Eliminated by Intertype's Automatic Magazine Shift





The new Intertype Autoshift eliminates hand cranking. To change from one magazine position to another, the operator simply sets a handy control knob... and the machine does the rest. On machines equipped with side magazines, two control knobs are provided, so that main and side units can be shifted simultaneously.

Changes from one magazine position to an adjacent position are made in less than two and one-half seconds; while changes from a top pair to a bottom pair are made in less than five seconds. Thus this new feature saves both time and effort, facilitates changes from one type face to another, and adds considerably to the productiveness of the machine as a whole.

The Autoshift is obtainable on both mixer and non-mixer Intertypes. It is an *exclusive* Intertype feature. For details, please address Intertype Corporation, 360 Furman Street, Brooklyn, New York, or the nearest branch.

Other Exclusive UNIVERSAL *Features*

1. Quick conversions from one model into another—even from mixer into non-mixer or vice versa—to meet changing requirements.

2. Finger-flip changes of type and time-saving twin distribution on non-mixer as well as mixer machines.

3. New features for insuring better slugs, including Intertype's famous baffle mouthpiece, bulb-type thermostat, and the mold cooling blower.

Also Available On Universal Intertypes

Automatic Quadding and Centering Device. Quads right, centers, and quads left, under finger-flip control.

Six-Mold Disk. With automatic ejector blade selection.

Mohr Intertype Saw. For automatic sawing of slugs as they are ejected from the machine.

Step Ahead with the UNIVERSAL INTERTYPE

VOGUE EXTRA BOLD COND. AND FUTURA FAMILY